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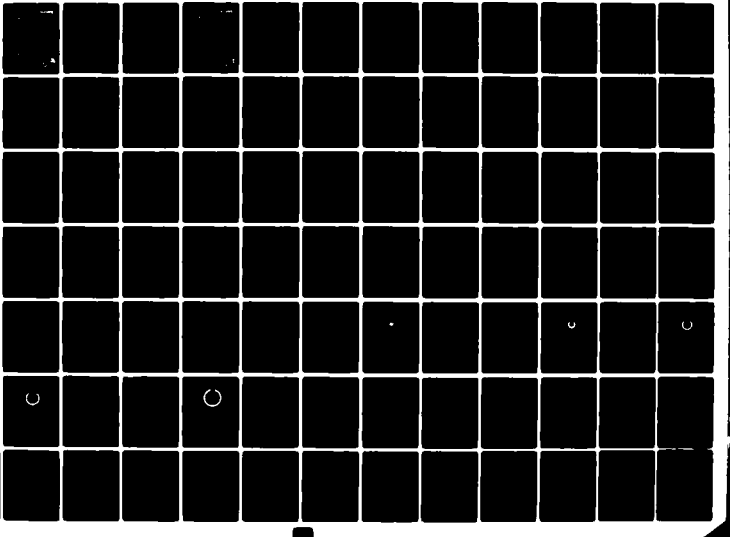

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Instructional Systems Design for the Army's On-Duty Education Program

TASK III: Handbook for Education Service Officers On the Army Developmental Education Program for Performance and Training (ADEPPT)

Thomas G. Sticht and Lydia R. Hooke

HUMAN RESOURCES RESEARCH ORGANIZATION
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Prepared for:

Department of the Army Adjutant General
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This report describes a design for a new approach to basic skills education in the Army to make the BSEP even more valuable to both the Army and the individual soldier. The new program, called the Army Developmntal Educational Program for Performance and Training (ADEPPT), provides on-duty instruction to teach basic skills and knowledges immediately usable by soldiers to help them (1) learn and perform Army jobs; 92) perform Army and civilian life tasks that can affect Army job performance; and (3) perform tasks that improve potential for success-

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PREFACE

This report describes the Army developmental Education Program for Performance and Training (ADEPPT). The report was prepared for the Department of the Army Adjutant General, Education Directorate and the Office of Personnel Management under contract number OPM-27 80 with the Office of Personnel Management. The contributions of LTC Clinton Anderson, Major Neil Grotegut, and Mrs. Louise Ellis of TAGO/ACES, and Mr. Richard Letaw, OPM, to the preparation of this report are gratefully acknowledged. Additionally, appreciation is given to Dr. Harry O'Neil, Jr., U.S. Army Research Institute for the Behavioral and Social Sciences, Mr. E. Neff, Director of ACES/USAREUR, ESOs and staff at Forts Dix and Bliss, and staff of the Navy's JOBS program, all of whom provided information useful in the preparation of this report.

The report was written by Dr. Thomas G. Sticht and Dr. Lydia R. Hooke of HumRRO's Educational and Training Systems Division, of which Dr. Robert Seidel is Vice President and Director. Mr. Michael J. Hillesohn of HumRRO served as project coordinator with the Office of Personnel Management.

The Army Developmental Education Program for Performance and Training (ADEPPT)

Executive Summary

Introduction

The Army conducts the largest basic education program for adults in the United States. In fiscal year 1981 the Army had enrollments of some 175,000 soldiers in the basic skills education program (BSEP). For these service members, the Army continues to offer one of the best opportunities for productive work and meaningful service to the Nation, while at the same time offering unexcelled opportunities for personal and professional development through education.

The present report describes a design for a new approach to basic skills education in the Army to make the BSEP even more valuable to both the Army and the individual soldier. The new program, called the Army Developmental Education Program for Performance and Training (ADEPPT), provides on-duty instruction to teach basic skills and knowledges immediately usable by soldiers to help them

- learn and perform Army jobs
- perform Army and civilian life tasks that can affect Army job performance
- perform tasks that improve potential for successful Army career progression through participation in and completion of secondary and post-secondary education.

Approach

The design of the new ADEPPT is based on (1) a thorough review of relevant documents and critique of the current BSEP by staff of the Army Continuing Education System and the present project; (2) review of research in the fields of cognitive science, adult basic and general education development, and military basic skills education; and (3) site visits to Army BSEP programs in CONUS and USAREUR; and to the Navy's Job-Oriented Basic Skills (JOBS) program.

Findings

The results of the foregoing analyses regarding the current BSEP reveals that:

- Guidance from the General Accounting Office and a Joint House and Senate Appropriations Committee requires that on-duty education be oriented toward the improvement of military performance, while high school completion or general education development (GED) programs are to be conducted in off-duty hours.

- Present BSEP programs have not been comprehensively developed to relate directly to skills requirements for successful job training, performance, and progression in the Army.

- BSEP programs at initial entry training (IET) and at the Unit do not interface coherently to provide a means of progressively developing job-related basic skills of soldiers.

- Many soldiers who are eligible for the BSEP under existing criteria never participate in the program.

Review of research literature indicated that:

- The approach to the development and assessment of basic skills education in the K-12 public school system is inappropriate for the Army's BSEP for adults, yet many of the BSEP practices are derived from those of the public elementary schools (e.g., the use of basic skills tests referenced to grade school children).

- Army BSEP students are primarily limited by oral and written language comprehension and application skills rather than by basic reading decoding skills (though the latter may be underdeveloped, too).

- Many BSEP students are less efficient learners than average children in the grade schools. When coupled with the factors of low oral and written language comprehension, this means that brief, concentrated, one-shot programs of remediation cannot achieve much long-lasting improvement in general basic skills.

Site visits to Army and Navy programs that offer job-related and real-life (as contrasted to grade school) related basic skills training, and review of Army research on job-related functional basic skills training indicated that:

- Basic skills education that is aimed directly at improving the performance of Army job tasks is currently underway at some posts. The experience of these programs, the Navy JOBS program, and earlier Army research on functional literacy shows that:

  - job-related basic skills can be rapidly developed

  - job-related basic skills education also improves general literacy, though not at as fast a rate as improvement in job-related basic skills.

- Job-related basic skills education requires extensive development of knowledge about job and real-life tasks to improve the comprehension and performance of such tasks.

The Army Developmental Education Program for Performance and Training (ADEPPT)

In the light of the above findings, a design for an Army basic skills program was developed that:

- Provides a continuum of opportunity to participate in on-duty education from the training base to the permanent duty station, and

- Provides a continuum of knowledge and skill development that accepts new accessions whose learning and literacy skills are underdeveloped, and systematically develops those skills in education programs that help soldiers acquire:

  - Knowledge and skills needed to succeed in the initial training environment and in the permanent duty station environment.

  - Knowledge and skills needed to learn and perform job tasks at skill levels 1 and 2 for persons in paygrades E1-E4.

  - Knowledge and skills needed to satisfy academic credentials requirements for promotion to paygrades E5 and above.

  - Knowledge and skills needed to learn and perform the duties of an NCO in training or permanent duty stations.

To recognize the focus of the new program for basic skills education in the Army on a continuum of development of basic skills to ehance job training and performance, the present project has coined the acronym "ADEPPT", which stands for the Army Developmental Education Program for Training and Performance. The acronym is pronounced like the word "adept", which means "thoroughly proficient".

The ADEPPT provides for continuous development of seven basic skills: reading, writing, computation, speaking, listening, learning strategies, and problem solving applied to five major knowledge and task domains in which the soldier performs both on and off-duty:

- **MOS Career Performance**: The actual performance of MOS tasks.

- **Direct Career Support**: Those tasks which are necessary for MOS career promotion and advancement, but do not involve job task performance, e.g., appearance before Promotion Board.

- **Military Environmental Support**: Those tasks and procedures specific to the Army, which are necessary for successful functioning, but are not directly related to career advancement, e.g., obeying barracks rules.

- **General Environmental Support:** Those competencies a soldier must possess for successful adult functioning which are not specific to the military, e.g., budgeting money.

- **Academic Support:** The basic skills and subject knowledge taught in schools and required for high school graduation.

The ADEPPT is divided into three components. ADEP I, offered during IET, focusses on helping soldiers complete their MOS training. Thus, the focus of ADEP I is on the MOS Career Performance domain, though some attention is given to the Direct Career Support and Military Environmental Support domains, too.

At the Unit, ADEP II continues the development of knowledges and skills in the three domains included in ADEP I. Additionally, ADEP II provides training in the knowledges and skills needed to successfuily perform in the General Environmental Support domain.

The Academic Support domain includes on-duty training in the skills required for high school completion, but these skills are actually taught in the context of the other four, job and real-life related domains. Thus, the Academic Support domain helps prepare the soldier for taking and completing the high school and secondary school courses needed to move forward in career progression to NCO ranks. Yet, the Academic domain does not teach the content courses specific to the attainment of a high school diploma. The latter are taught in the off-duty high school completion program.

The final component of the ADEPPT incorporates the current ASEP (Advanced Skills Education Program) that is aimed at preparing potential NCO's with the communications, problem solving, management, and leadership skills they need to attain NCO rank.

To facilitate the development of an ADEPPT curriculum, the present report includes explicit examples of the types of tasks involving basic skills that a soldier is required to perform in each of the five domains. Additionally, some 300+ measurable objectives are included which provide the basis for the development of a curriculum of basic skills education that could start with a soldier who is inept, and render him or her ADEPPT.

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Chapter 1

Basic Skills Education in the Army

The Army is currently involved in activities to redesign the Basic Skills Education Program (BSEP). The new program will provide on-duty instruction to teach basic skills and knowledges needed to (1) learn and perform Army job tasks, (2) perform Army and civilian life-role tasks that can affect Army performance, and (3) perform tasks that improve potential for successful Army career progression through participation in and completion of secondary and post-secondary education. To accomplish this long-term development in a cost-effective manner, the Army's new program is being developed using methods, procedures, and materials that are based upon research and development over the last decade and a half by the Armed Services and civilian research centers.

As one of the activities in developing a new approach to Army on-duty education, the present report considers issues that have lead to the need for a new approach to on-duty education in the Army (Chapter 1), and provides a review of research-based concepts regarding the basic skills and adult basic skills development (Chapter 2). Based on the preceding review, and research conducted for the present project, a conceptual framework is presented for the design and development of an on-duty Army Developmental Education Program for Performance and Training (ADEPPT) (Chapter 3). The discussion of the ADEPPT concept includes a general overview of the system, a more detailed analysis of the scope and sequence of the program, and an extensive, detailed list of terminal objectives and instructional goals (Chapter 4). The latter could become the basis for a curriculum development effort to deliver a comprehensive, coherent, and

standardized instructional program of continuing education to Army personnel during initial entry training, at the unit, and for upward progression through the ranks to leadership positions.

On-Duty Education in the Army: The Need for a New Approach

A report prepared by staff of the Army Continuing Education System (ACES) and presented at Army Day of the National Adult Education Conference, October 1981, provides a succinct summary of precursors to the present Basic Skills Education Program (BSEP) of ACES, and a critique of problems with the BSEP that have led to activities to develop a new approach to basic skills education in the Army. Table 1 is adapted from a table presented in the above report.

Precursors to the Current BSEP

Table 1, Part I summarizes the major aspects of basic skills education in the Army as of the era of the Viet Nam conflict in the mid-sixties. This period also corresponds to the era of the initiation of the Great Society social programs of the Johnson presidency. The confluence of the need for manpower in Viet Nam and the interest in human resources development in the Great Society initiatives led to an interest in lowering mental aptitude, and therefore literacy, requirements for entry into the military so that personnel strength goals could be met. At the same time it was planned to use the Armed Services to develop human resources for the Nation at large. These objectives led military management to the initiation of Project 100,000, in which mental qualification standards for entry into military service were lowered to permit 100,000 people with Armed Forces Qualification Test (AFQT) scores between the 10th and 20th percentiles to enter the Services.

Table 1

Summary and Critique of Past and Present Basic Skills Programs in the Army

PART I
Precursors to Current Programs of Basic Skills Education

(Training Base)

Advanced Individual Training Preparatory Training (AITPT)

Army on-duty functional literacy program conducted in the training base. Developed at Fort Ord, 1973.

Illiteracy Problems in Military Service

DOD needs to develop a more comprehensive program to deal with literacy problems of soldiers. (GAO Report, May 1977)

(Permanent Duty Station)

High School Preparatory Instruction

A group study remedial education program using USAFI materials to develop necessary competencies to attain a high school diploma or equivalency. (AUTH: Title 10, USC Annotated, 4302)

Predischarge Education Program (PREP)

VA *funded on-duty remedial education program primarily for high school* completion. (AUTH: PL-81-210, Mar 70). PREP ended with termination of Vietnam-era GI Bill and passage of VEAP. (AUTH: PL 94-502, Oct 76).

On-Duty High School Completion Program (HSCP)

As a result of PREP termination, DOD continued on-duty HSCP using DOD funds. (AUTH: ASD(M&RA) Memo, 28 Oct 76, David P. Taylor memo)

Basic Skills Education Program (BSEP)*

On-duty, remedial education program to develop soldier educational competencies. FY 78 DOD Appropriations Bill stated that on-duty education should be directly related to military requirements such as remedial or skills training. This same bill also directed that on-duty HSCP be conducted off-duty since program degraded *readiness and morale.* (*AUTH: FY 78 DOD Appropriations Bill and Senate* Report 95-325, 1977)

*Landmark Guidance

PART II
Current Basic Skills Education Program (BSEP)

BSEP I

On-duty remedial education program consisting of literacy and ESL conducted in the training base. (AUTH: AR 621-5)

BSEP II

On-duty remedial education program conducted at permanent duty stations for soldiers in skill levels 1 and 2. (AUTH: AR 621-5)

Promotion Program

8th grade education or GED equivalency required for E-5 promotion.

Off-Duty High School Completion Program (HSCP)

Off-duty program for soldiers to earn HS diploma or GED certificate. 100% Tuition Assistance authorized. (AUTH: *PL 96-154, 1979*)

Promotion Standard

High school diploma/GED required for E-6 promotion.

***Advanced Skills Education* Program (ASEP)**

On-duty remedial education program conducted at permanent duty stations for soldiers in skill levels 3, 4, and 5. *ASEP complements NCOES and* MCOOP. (AUTH: 621-5, AR 351-1 and AR 350-17.

Off-duty courses required by colleges prior to entry in degree programs. (AUTH: AR 621-5)

PART III
TAGO Critique of Current BSEP and Recommended Changes

Problem: New ASVAB has reduced the number of BSEP I literacy eligibles. Currently only .6% of new accession require BSEP I literacy.

Action: TRADOC is discontinuing BSEP I literacy in favor of locally developed MOS oriented tutorial program to enhance successful IET completion.

Recommendation: That TAGO/TRADOC continue to ensure *program effectiveness and* accountability.

Problem: Disconnect between BSEP II and HSCP in that on-duty BSEP does not normally provide high school completion credit.

Action: TAGO/TRADOC ongoing initiative to develop the enlisted soldiers competency based education level (EXCEL) program where job related courses are taught on-duty and diploma unique courses are taught off-duty.

Recommendation: That OCSPER support this EXCEL program initiative

Problem: Soldiers must pay for GED testing in CONUS.

Action: Upon disestablishment of USAFI, Congress directed that GED testing be administered by State Departments of Education in CONUS. This guidance has been interpreted to mean that soldiers must pay for GED testing in CONUS. GED testing is free overseas. (HAC letter to SECDEF, 11 Jun 1974). To resolve this issue Air Force has submitted proposal to OSD to permit free GED testing in CONUS. AF proposal 4944 currently in OMB.

Recommendation: That OCSPER support this proposal.

Problem: Disconnect between ASEP courses and SOCAD programs in the contract area. Reason is SOCAD programs are conducted by basic agreements between installation and regionally accredited institutions. ASEP delivery is made by competitive *bid between the installation and institution.* The institution may or may not be regionally accredited.

Action: TAGO, OTJAG, and OASA(MDA) are conducting discussions to resolve.

Recommendation: That TAGO continue initiative to resolve.

It was recognized that many of the "new standards" recruits would have low literacy skills and would need remedial literacy training. To meet this need in the Army two types of literacy programs were initiated. The first type of remedial literacy progam was developed to prepare entering recruits with the literacy skills needed to successfully complete basic military training and job technical skills training. In effect, this program was designed to meet the strength needs of the expanding Viet Nam conflict. This program was first called Army Preparatory Training (APT) and was conducted prior to basic training in a program of some three to six weeks duration. The objective of the program was to develop reading skills up to the 5th grade level. Later, following considerable Army sponsored research (Sticht, 1975 a,b), the pre-basic training Army Preparatory Training program was shifted to occur after basic training (in which demands for literacy had been reduced to a minimum) to prepare personnel for Advanced Individual Training (AIT). This program was designated the Advanced Individual Training Preparatory Training (AITPT) program.

Like the APT program, the AITPT program was conducted during duty hours in a three to six week program. Unlike the APT program, however, the AITPT program taught job-related literacy skills derived from analyses of the types of literacy tasks soldiers would encounter in their job technical training and on the job. This "functional literacy" approach differed considerably from the "general literacy" approach of the APT and made much greater improvements in soldiers' abilities to perform required job-reading tasks (Sticht, 1975 a,b).

In addition to the literacy training introduced into the training base to meet the manpower requirements of the Viet Nam conflict, the Army initiated an on-duty high-school completion program to meet the objectives of the human resources development component of the Great Society initiative. This program, called the Predischarge Education Program (PREP) provided remedial education aimed at helping soldiers obtain high school diplomas or equivalency certificates prior to re-entry into civilian life.

Following the Viet Nam mobilization, the draft was rescinded and the all-volunteer force was established. Project 100,000 was discontinued and mental standards for entry into military service were raised. While these actions reduced the numbers of enlistees entering the Army with severely low literacy skills, there were nonetheless many who entered reading poorly and so the AITPT program was left in place, though with greater flexibility in the curriculum permitted than had been developed in the standardized course of Project 100,000. Additionally, though the PREP program of on-duty high-school completion was discontinued, the Army continued an on-duty high-school completion program as a part of the education "package" used as an incentive for enlistment by recruiters.

Thus, at the mid-seventies, the Army had two types of remedial literacy training programs in operation. One, in the training base, was aimed at the functional goal of helping marginally literate inductees succeed in their initial entry training. The other, conducted on-duty at the permanent duty station, was aimed at the credentialing goal of helping soldiers without high-school diplomas obtain one, or an equivalency certificate.

As Table 1 indicates, around the 1977 time frame, two events occurred that led to changes in the Army's basic skills programs, First, a General Accounting Office study of illiteracy and marginal literacy in the Department of Defense recommended, among other things, that the Department of Defense "Analyze the value and effectiveness of current remedial training programs in improving trainability and job performance," and, "Should remedial programs be continued, make certain that they are integrated with skill training, career counseling, and general education development..." (GAO Report, May 1977). Thus, the GAO turned the focus of literacy training away from the credentialing goal and onto the functional goals of improving trainability and job performance. Further, the GAO called for integrating literacy programs with job technical skills training and general education development.

Following upon the GAO report, the Congress of the United States also focussed upon the functional goals of literacy training when both houses expressed "...considerable concern over the implications of attempting to correct educational deficiencies (of military personnel) with programs that require school attendance during duty hours...(The Congress went on to express the belief that) "...more effective use of these (education) monies would result from programs that emphasize basic educational skills prior to enlistment." (Congressional Record, August 4, 1977, PH8742). In further comments during the Fiscal Year 1978 Department of Defense budget review, the House and Senate Appropriations Committees, acknowledging the fact that the Army and other Services may have to enlist a number of less literate personnel under the all volunteer force concept, expressed concern that on-duty high school completion programs take personnel away from needed military training and contribute therefore to a degradation of

readiness and morale. They directed that on-duty education programs be directly related to military requirements, such as remedial academic or skill training, and that high school completion be conducted off-duty. (Army Chapter on Status of Basic Skills/Literacy, OASD(MRA&L), reply to memo dated 13 November 1980, p.1). As Table 1 indicates, this was "landmark guidance" that lead to the current Basic Skills Education Program (BSEP).

The Basic Skills Education Program (BSEP)

Part II of Table 1 summarizes the Basic Skills Education Program system as it currently is presented in Army Regulation 621-5 dated 15 October 1981. A more detailed description of the policy quidance and procedural instructions for the components of BSEP has been extracted from AR 621-5 and is given below to set the stage for the subsequent critique of BSEP, conducted by the ACES staff and in the present work, which has led to the present report.

AR 621-5, "The Army Continuing Education System (ACES)", describes the Army's policy for the Basic Skills Education Program as follows:*

> "Policy. The Army's policy is to provide on-duty, job-related basic skills development for the soldier which will improve --
>
> a. The likelihood of performing well both in training and on the job.
>
> b. Capability of functioning effectively in the community outside the immediate work setting.

*Sections dealing with BSEP ESL for non-native speakers of English are not cited here.

c. Potential for completing high-quality, off-duty high school, college, vocational, technical, apprenticeship, or other education programs.

d. Potential for pursuing the wide choice of education programs covered by VEAP or other veterans benefits.

Concept. BSEP will develop job-related educational skills from soldier's entry into active service through completion of the Advanced Course, Non-Commissioned Officers Education System (NCOES)....As a second program, BSEP will be made part of ESPs and master training schedules. Conduct it during normal hours at no cost to participants. Formal entry into BSEP is a commander's decision, made after coordination with the ACES ESO and discussion with the soldier. One main thing to consider in selecting participants should be that soldiers are willing to learn and use this knowledge productively in the Army...

a. TRADOC will conduct BSEP I during initial entry training; BSEP I ends once a soldier earns an MOS. This phase of BSEP provides soldiers basic literacy instruction in reading and arithmetic to form a basis for MOS training. The instruction will be given prior to or during advanced individual training (AIT) or at any point during the One Station Unit Training (OSUT) cycle....Troop commanders in the training base may refer any soldiers who might have to be released due to reading, writing, speaking, listening, or computing trouble to the AEC staff for special counselling and entry into BSEP I literacy....Soldiers who score below a raw score of 19 in verbal and numerical concepts on the Select Adult Basic Learning Examination (SelectABLE)...will be considered first for BSEP I. Soldiers who score between 19 and 26 on the SelectABLE will also be reported to the commander as potential eligibles for literacy instruction.

b. BSEP II provides soldiers instruction in reading, writing, speaking, listening, and computing skills needed for them to perform military duties through grade E5. This instruction will be oriented to the job being performed and will include military life-coping skills and learning strategies. The Test of Adult Basic Education (TABE) will be used as a basic to place members in proper levels and measure their educational achievement after instruction. Instruction will be geared to raise literacy skills to at least the ninth-grade level as measured by the

Soldiers are normally identified as potentially eligible for BSEP II instruction in one of the following three ways:

(1) Referrals based on GT scores. During in processing at permanent duty stations, soldiers who have a GT score of less than 90 will be referred within 30 days.

(2) Unit commander referrals. These are based on supervisors' assessments or on voluntary requests by soldiers.

(3) SQT referrals. Those who score less than the minimum required for MOS verification on SQTs as reported on the Individual Soldier's Report (ISR). Soldiers whose retention is in the best interests of the Army will be considered first.

c. ASEP provides instruction to help NCOs (in grade #6 and above) meet their primary responsibilities as trainers, supervisors, managers, and administrators. ASEP instruction will be tailored to meet command needs at the installation/community level." (Army Regulation 621-5, Army Continuing Education System (ACES), 1981, pages 2-1, 2-2.).

Education Service Officers (ESO)s have the responsibility of (1) basing courses on the educational needs of soldiers, (2) making BSEP II and ASEP available to enlisted members of all commands, (3) identifying educational skills that must be reinforced by taking part in BSEP I, (4) operating BSEP within budgetary limits, (5) obtaining equipment and instructional materials related to MOS's, (6) using AFEC facilities, and (7) contracting for BSEP I, II and ASEP instruction with regionally or nationally accredited schools.

Secondary and postsecondary programs are also part of ACES and policy relative to them is also set down in AR621-5 as follows:

High School Completion Program (HSCP)

"Objective. The HSCP gives soldiers a chance to earn a high school diploma or State-issued equivalency certificate.

Policy. a. All soldiers with less than a high school education will have the opportunity to attain a high school diploma or its equivalent.

b. Counsellors will encourage and help eligible eligible soldiers get a high school diploma or certificate.

c. No Department of Defense component will issue a high school diploma or similar document to active duty personnel based on performance on high school equivalency tests. High school level success based on these tests will be recognized by the military services only after a state or local civilian agency has awarded the appropriate credential.

d. Soldiers may be enrolled in on-duty BSEP and the off-duty HSCP at the same time.

e. HSCP courses will be conducted only during off-duty time.

f. Soldiers qualified for BSEP participation who do not possess a high school diploma or equivalency will be allowed to take the high school GED test to determine eligibility for a State-issued certificate after satisfactory completion of BSEP. The test may be conducted during on-duty hours.

Tuition Assistance. When tuition is required, all soldiers who are not high school graduates will be authorized 100 percent tuition assistance for off-duty courses leading to a high school diploma or its equivalency. HSCP courses must have academic objectives, one of which may be to prepare the student to qualify on the GED test, when 100 percent tuition assistance is authorized. Courses designed solely to prepare a student for the GED test will not be approved for tuition assistance.

Contracting. a. In CONUS, Alaska, and Hawaii, contract for instruction for either on- or off-post programs with diploma-granting institutions which are State approved and are accredited by a regional accrediting association. One hundred percent tuition assistance is authorized.

b. In overseas areas, try to use accredited schools which award high school diplomas. GED testing is provided at AECs. Those who are administered GED tests overseas are encountered to apply concurrently for State-issued equivalency certificates.

c. Try to contract for HSCP and BSEP programs with the same school in order to promote compatibility." (Army Regulation 621-5, Army Continuing System, 1981, page 3-1).

As an initial response to GAO and House and Appropriations Committee recommendations, the BSEP system as outlined in Table 1 and set forth in AR 621-5 moved in the direction of integrating literacy and job skills training and general education (high-school completion) by focussing BSEP I and II more on functional military requirements than on high-school completion requirements. This permitted the offering of BSEP during duty hours in keeping with congressional directives. Further, the ASEP program was designed to permit the preparation of soldiers to move into supervisory and leadership roles through job-oriented basic skills development. To encourage participants to enroll in the off-duty high-school completion program, 100% tuition assistance was provided.

Critique of the BSEP

In 1981, staff of the Army Continuing Education System (ACES) critiqued the progress of the implementation of the BSEP with the findings summarized in Part III of Table 1. Additional analyses in the present research confirmed the problems identified by the ACES staff and identified additional problems that call for new directions for basic skills education in the Army. The problems identified by the ACES staff and the current project may be summarized as follows:

• In general, BSEP programs have not been developed to relate directly to skills requirements for successful job and training performance in the Army. Furthermore, even where programs are successfully directed to job demands, as in the "remedial loop" form of IET BSEP or the SQT preparation course at Fort Dix, they appear to be one-shot attempts to focus on skills demanded by the requirement and not on the continual development of skills required for a soldier's career progression.

• BSEP programs, on the same or different bases, may fail to interface coherently with each other and, in general, do not represent an integrated plan meeting both immediate skills needs as they occur and gradually developing the higher level skills required for successful functioning at senior levels.

Additionally there is no current policy or practice which provides for keeping track of the BSEP progress of individual soldiers to facilitate provision of continuously available skills support for progressive demands of the job situation.

• Many soldiers who would appear by available criteria to be in need of skills support may never participate in any BSEP program. It is not known whether those most likely to profit from skills training are indeed the ones who become participants in BSEP.

• BSEP programs in general do not appear to recognize the differences in types and levels of skills demanded by job performance and "real world" functioning and by training. After IET, there are few BSEP programs providing explicit support for job training for soldiers who may require such support at no other time.

• The skill uses required to function successfully in the military (outside the job) and civililan community are neither assessed nor addressed by BSEP programs. However, it has been found that people with skill deficits in other areas, are also likely to be unable to handle necessary skill uses in everyday life.

• Various specific aspects of typical BSEP programs or practices could be improved through reference to current understanding of the nature and development of the basic skills, particularly with regard to understanding the relationships among knowledge areas and the basic skills and the differences between the development of basic skills by children in the public school system and the development of basic skills in organizational settings such as the Army.

With regard to the High School Completion Program:

• The requirement for a high school diploma for promotion to E-6 may be justified on the grounds that the knowledge and skills acquired in receiving this credential enable more successful career functioning. However in the typical program no attempt is made in the delivery of high school instruction to make explicit connections between what is being taught and the soldier's job and military roles.

• The requirement that courses for high school completion be taught off-duty unless directly related to MOS performance has caused enrollment in such programs to drop, except where local school districts award liberal credit for military experience and training.

• How and even whether a soldier obtains a high school diploma depends on the specific requirements of the district associated with his duty base. A soldier beginning a program at one base may not be able to transfer credit if he is stationed somewhere else.

The Army Developmental Education Program for Performance and Training (ADEPPT)

In view of the problems identified above and in Table 1, TAGO/ACES initiated the present project to develop a conceptual framework for the design and development of an on-duty education program that:

- Provides a continuum of opportunity to participate in on-duty education from the training base to the permanent duty station, and
- provides a continuum of knowledge and skill development that accepts new accessions whose learning and literacy skills are underdeveloped, and systematically develops those skills in education programs that help soldiers acquire:
  - Knowledge and skills needed to succeed in the initial training environment and in the permanent duty station environment.
  - Knowledge and skills needed to satisfy academic credentials requirements for promotion to pay grades E5 and above.
  - Knowledge and skills needed to learn and perform the duties of an NCO in training or permanent duty stations.

To recognize the focus of the new approach to basic skills education in the Army on a continuum of development, to replace the brief, one-shot, "remedial" programs typical of the "crisis" approach to literacy training, and the focus on the functional consequences of basic skills education on job training and performance, the present project has coined the acronym "ADEPPT," which stands for the Army Developmental Education Program for

Performance and Training. The acronym is pronounced like the word "adept," which means "thoroughly proficient." The ADEPPT concept and its relation to the action recommendations of Table 1 for BSEP I and the EXCEL program are discussed in Chapter 3. First, however, to provide a basis for better understanding the rationale behind the ADEPPT, Chapter 2 discuses fundamental concepts regarding the basic skills and the development of basic skills programs for adults.

Chapter 2

Basic Skills Education in the Public Schools and in the Army

In Chapter 3 a basic skills education program is discussed that differs considerably from traditional basic skills programs for adults that focus on the teaching of reading, writing, and arithmetic as precursors to more advanced work leading, eventually, to the high school diploma. Rather than being skills oriented, as are typical adult basic skills programs, the program described in Chapter 3 is knowledge oriented. Further, rather than offering a brief, 3 to 6 or so week course of concentrated, remedial literacy training, as has been the Army's (and civilian industrial and manpower training) approach in the past (see Chapter 1), the program discussed in Chapter 3 calls for an extended, long-duration program of distributed practice in applying basic skills in real-world tasks to develop new types and "levels" of basic skills in soldiers who need such development.[1]

Because the program discussed in Chapter 3 differs considerably from traditional adult basic skills programs, the present chapter sets the stage for understanding why the program of Chapter 3 is like it is. The discussion proceeds by first considering how basic skills education in elementary schools is generally accomplished, and then how the Army's circumstance differs from the public school system. Next, attention is focussed on the reasons for rejecting brief, concentrated basic skills programs for Army personnel.

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[1]Study of Figure 4 in Chapter 3 is needed to follow the discussion in the present chapter.

Basic Skills Education in the Elementary Schools and in the Army

The most extensive and successful basic skills development programs have been undertaken by the public schools, specifically the kindergarten through twelfth grade system. The public (and private) schools' task is to develop basic skills in children having a wide range of skills when they enter the system. These children are similar in that, while most of them have developed a fair amount of competence in the skills of speaking, listening. and simple problem solving, most of them have very little skill in reading, writing, and computation at the start of school. The schools are given twelve years in which to develop high levels of basic skills and an extensive body of knowledge. The latter is the goal, in part, because the schools do not know what specific jobs or tasks children who enter the schools will have to perform later on in life. Therefore, the schools must develop skills and knowledge to such a level that students will be prepared to cope with whatever problems they may encounter after school in adult life.

The schools accomplish their objectives following what can be described as a general developmental approach toward the teaching of the basic skills. In this approach, children are first taught the fundamentals of reading and writing (decoding print, forming letters). Initially, materials, words and sentences on which these new skills are practiced, are very simple, far more simple than the oral language with which almost all the children can cope. Gradually, over the years, the complexity of the material is increased, but while the focus of instruction is on the development of reading skills, the content of material is kept general, that is, it includes a variety of topics thought to be of interest to children. It is a number of years, however, before the material

presented for reading matches in difficulty the language most children can cope with orally.

In the elementary grades, 1st through 6th, students are usually taught reading by means of basal reading series, extensive (and expensive, with the cost of producing a series likely to exceed $20 million) materials that systematically increase in complexity of language and difficulty of reading and thinking tasks. After about the 6th grade, reading and writing per se may no longer be taught (except "remedially"), but are practiced in the context of subject matter areas, which, like the basal readers, systematically grow gradually more difficult and complex through high school.

To assess growth in reading, special reading tests have been developed by many companies that are standardized in administration, and that provide norms for comparing how well a local group of students compare to the national sample. An important aspect of such tests is that they are designed to discriminate among students, they must contain a range of items from easy to very difficult, and they cannot be based on any particular curriculum because they are to be used nationally, and the basal readers and types of vocabulary and concepts taught differ from one school to the next. Consequently, the reading tests may not measure exclusively what is taught in the schools, but may, additionally, reflect the learning that takes place in reading and conversing outside of school. For this reason, it is difficult to know how to directly develop a curriculum that will be assessed by the standardized tests to see if what is being taught is what is being learned.

Most standardized, normed, commercially available reading tests have two components, one that assesses vocabulary word knowledge, usually with

words presented either in isolation or in very short contexts. In the other, "comprehension" part of reading tests, students are typically given reading passages on a variety of subjects and required to answer questions, factual and inferential, about them. Both passages and questions increase in difficulty. Many reading tests are also timed, so that a student's score is usually given in terms of reading grade levels. A grade level of 6.0 for example, indicates that a given child has produced the number of correct answers that is equal to the average number of correct answers given by children at the beginning of the sixth grade.

Basic skills tests of mathematics present students with a variety of numerical computations and word problems. Some attempt is made to cover the range of concepts, procedures etc., taught in a K-12 curriculum. Grade level equivalent scores are assigned to individual performances according to the same principles as used for reading tests. It should be noted that tests of mathematical basic skills assess not only computation but the skills of reading and problem solving as well.

Although the basic skills of speaking and listening are rarely tested directly, the common language component makes it likely that in the later grades, reading tests are predictive of listening comprehension skills. Problem solving skills are also indirectly assessed in other tests, subject matter tests as well as basic skills tests.

In recent years, traditional norm-referenced basic skills tests have begun to be supplemented and even replaced by criterion-referenced tests. In such tests a student's performance is assessed not relative to grade level norms, but with regard to mastery of certain specified knowledge or tasks considered appropriate for that grade level.

Many arguments can be advanced as a reason why this general academic approach should prepare people to meet the demands for basic skill use in the real world. One is that there are certain fundamentals which, virtually by definition are involved in skill applications, no matter what the context. These fundamentals, e.g., number recognition, sight-sound correspondences, are indeed emphasized in schools. Secondly, a large amount of what is taught in basic skills instruction, while particular in itself and not required in all instances of skill use, is common to many academic and practical contexts, e.g., general vocabulary words such as "avoid" or "continue", specific number facts, etc. The more of these "general particulars" one is taught the more likely one is to know the demanded particulars in an instance of skill use.

A third line of argument would state that the levels of language and problem solving ability (particularly in regard to making inferences and judgments about new material or situations) required of a person to perform adequately in high school or to score at a 12th grade level are really much higher than the demands on basic skills made by most jobs and other non-academic situations. Even though academic and real-world skills may be quite different, a person who can cope with the former is likely to be able to perform the latter independently with minimum help. (Note that this does not mean that those persons without high levels of skill on academic tasks, cannot cope or learn to cope with such tasks).

For whatever reasons and despite much criticism of traditional educational approaches, the K-12 school system is generally successful in producing graduates who can cope with the basic skills demands of practical life. This may be demonstrated by the fact that fewer that 10% of those who had completed 12 or more years of school fell in the lowest

competency category when it came to coping with questions based on real-life literacy tasks as given on the Adult Performance Level Test (APL Staff, 1975). Research cited in Sticht (1975a) demonstrated that for several Army jobs performance on a standardized (academic) reading test was predictive (median r = .70) of performance on a test composed of job reading tasks. Additionally, for four Army job fields, both job task performance and job knowledge was found to be positively related to grade level score on standardized mathematics and reading tests as well as on an experimental test of listening. Based only on the demonstrated success of the schools, it would not be unreasonable for the Army to use an adaptation of the school's general developmental approach when confronted with the need to develop the basic skills of certain of its recruits. However, such an approach appears less appropriate when the differences between the conditions and objectives of the Army and the schools are considered.

The Army contrasted with the K-12 school system.

First of all, the Army does not have the 12 years accorded to the school system for developing required levels of basic skills. Although the exact maximum number of hours a soldier could profitably spend in basic skills training in the Army without detracting from readiness cannot be determined from existing data, this number is obviously far less than twelve years. Secondly, while the population taught by schools encompasses a wide range of ability, including many with above average abilities, Army basic skills programs deal primarily with people indicating less than average ability in cognitive abilities.

Specifically, with regard to language skills, the following differences in populations should be kept in mind. The schools start with a population of children who may be assumed to have oral language skills

equal to most of the demands of their lives but who lack the skill of decoding print to enable them to read as well as they understand speech.

In contrast, the majority of soldiers in BSEP may have considerable ability to recognize printed language. For instance, the group of BSEP students likely to be lowest in reading skills, those discharged after BSEP I, was found to be reading at the 4.4 grade level indicating considerable word recognition ability (Army Continuing Education System, 1981). However, much data indicates that these soldiers can be expected to lack vocabulary, knowledge and comprehension skills necessary to meet many of the oral and written language demands of their lives. Sticht, Hooke and Caylor (1981), for example, found that the majority of a sample of applicants for military service who were poor readers were also poor listeners. Strikingly, Sticht (1982) found that an Army sample reading at the 5th grade level actually performed worse on a test of listening than did children reading at the same level (see next section). Thus, the Army basic skills programs must serve trainees who are low not only in reading skill, but also in language and vocabulary required to function well in a variety of knowledge domains.

It is also important to note here that soldiers are enrolled in the Army basic skills education program because of low test scores and/or poor performance attributed to basic skills deficits. Furthermore, the great majority of these soldiers have had long exposure to the public schools' methods of basic skills development. Thus, the Army is dealing with a population for whom the general skills development approach followed by the schools has demonstrably failed to produce the required levels of basic skills. This implies that a different approach might be called for

in the Army to avoid, or at least reduce, problems that may result from recreating conditions of previous failure.

Another very important difference between the Army's and the schools' purposes in basic skills training is that while the schools do not know exactly what pragmatic tasks they are preparing any given child to perform, the Army does or can know for each soldier, what basic skill tasks are likely to be encountered by soldiers. These are the tasks involved in the performance of MOS duties and Career Support tasks (Figure 4)[1]. The schools, by choice or circumstance, or both, concentrate on developing skills in the outer, Academic ring of Figure 4, hoping or assuming that by and large these will be sufficient to meet the basic skill and knowledge demands in the inner rings. The Army, on the other hand, is most concerned with insuring that basic skills applications in the center of the circle are performed successfully. The further a domain of knowledge and skill use in Figure 4 is from the center, MOS performance, the less directly does instruction in that domain affect job performance, and the less likely it is that the full range of knowledges and skills included in a given domain could qualify for inclusion in on-duty basic skills education.

Because the Army does (or can) know a great number of the specific types of basic skills applications soldiers will encounter in IET and at the unit, it can develop basic skills programs directly aimed at increasing the soldier's skills in these particular applications. Additionally, assessment tests of reading, writing, etc., can be developed to determine if what is being taught is what is being learned rather than relying on

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[1]Chapter 3

the "curriculum free" tests developed to assess the learning of school children both in and out of school. Such tests appear to indicate whether or not an adult literacy student reads as well as a typical grade school child. The following section suggests that the use of standardized, grade-school normed, reading tests for assessing the skills of adult basic skills students may lead to incorrect conclusions about the adult's reading skills.

Problems With Brief, Concentrated Basic Skills Programs

A major feature of most adult literacy programs conducted by the military and human resources development programs in industry, job skills upgrading and similar organizational settings, is their brevity. In the military, remedial literacy programs are typically three to six weeks or so in duration, and permit some 100 to 200 hours of instruction. The brevity of such programs appears to be based, at least in part, on the often held belief that marginally literate adults can learn to read more quickly than can children: "Adults have better visual perception than children, larger speaking and listening vocabularies than children...Such people coming to class with a new motivation for reading can learn very quickly, especially if they can see the logic of what they are doing — that is, if they see a logical sequence in the program, if they grasp the concept of spelling and sound, if they are confronted with reasonable and psychologically appropriate problems." (Mary C. Wallace: Literacy Instructor's Handbook, 1965, p.74).

The belief that adult literacy students can learn more rapidly than children in the elementary school system is often supported by data showing that adult literacy students in a particular program made one, two, or even more years of gain in reading in as few as 14, or 50, or 100 or so

hours of instruction (Sticht, 1982). Thus, what the typical child in the public school system requires up to two years to learn, the adult illiterate is said to learn in just a few hours. How can this be so?

Rather than suspecting the psychometric tests by which improvement in reading is assessed in adult basic skills programs, in which in most cases a year or two of "learning" can be achieved simply by answering three to five more items correctly, the assumption seems to be made by adult educators that if adult literacy students score at a given grade level on a basic skills test, then the adult student is probably just as proficient, or more so, in that skill as the student in the grade school who scores the same as the adult does. Thus, if an adult literacy student scores on a reading test at the fifth grade level, the assumption may be made that the adult can now perform fifth grade literacy tasks as effectively and efficiently as can a typical fifth grade child.

The "Reading Potential" Concept. The belief that adult marginal literates can make rapid increases in literacy in brief remedial programs appears to be based, at least in part, on the idea that adults have had more experience than grade school children, they have had more opportunity to acquire concepts through oral language and thus they can be expected to have a larger oral vocabulary and to be able to comprehend information presented in the spoken language more effectively than can a child. This presumed higher capability of marginal literates in oral language over grade school children provides a higher "reading potential", so it may be argued, and hence it is possible for adult marginal literates to make more rapid increases in learning to read as they close the "gap" between what they can already comprehend in oral language and what they can comprehend in the written language.

The reading potential concept mentioned above is central to the understanding being explored here as to why it is believed that marginally literate adults can make rapid progress in literacy programs of short duration. Briefly, the reading potential concept states that, in the typical case, people first develop vocabulary and comprehension skills by means of the oral language skills of auding[1] and speaking. Then, when they begin to learn to read, they learn to comprehend by reading what they previously could comprehend only by auding. Stated otherwise, in the typical case of the person who is learning to read, he or she will begin training with a relatively large capability of comprehending the spoken language. In learning to read, then, one of the person's major tasks is to learn to comprehend the printed form of language with the same accuracy and efficency as he or she comprehends the spoken form of language.

Because people typically learn to comprehend language by auding before they can comprehend it by reading, it is possible to consider that, in learning to read, they close the "gap" between the auding and reading skills, both of which permit them to comprehend linguistic message displays. This process is illustrated in Figure 1, where it is seen that, at the beginning of schooling, people can comprehend language better by auding than by reading. As they progress through the school grades, they acquire more and more skill in reading, and eventually close the gap between auding and reading skills.

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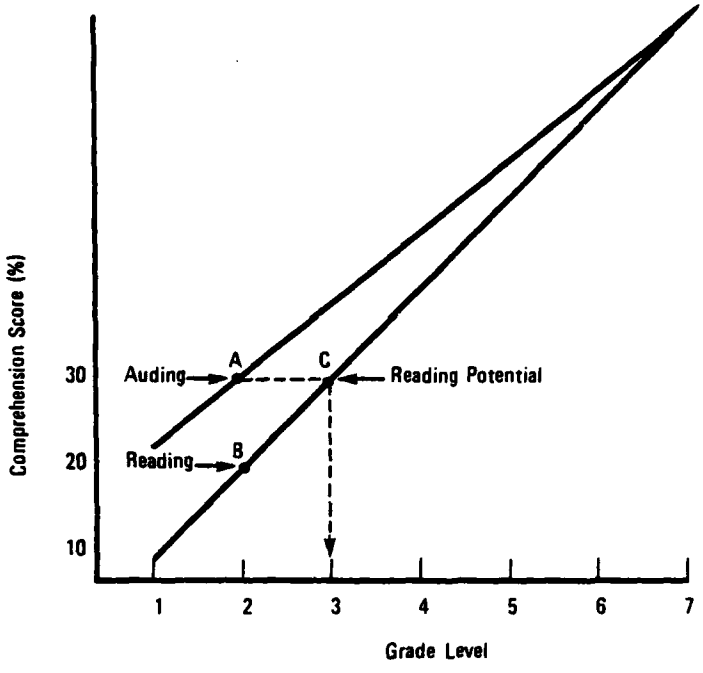
[1]Auding is a word coined by Brown (1954) to name the special kind of listening we do when we listen to speech. Just as reading is a special kind of looking, i.e., looking at printed language to get meaning, auding is a special kind of listening:listening to spoken language to get meaning.



A – Indicates the normative auding score for the 2nd grade, called auding at the 2nd grade level.

B – Shows the normative reading score for the 2nd grade, called the 2nd grade level.

C – Shows conversion of the normative auding score to a reading "potential" score by drawing a horizontal from A to intersect with the reading curve, and then dropping a perpendicular line to the abscissa.

The example shows a reading potential score of 3rd grade.

Thus, the case illustrated shows a person auding and reading at the 2nd grade level, with a reading potential score of 3rd grade level.

Figure 1. **Schemata Showing Relationships Among Auding and Reading Comprehension Scores as a Function of School Grade Level**

In the reading potential concept, a person's capabilities in auding are considered to establish a potential for reading. In Figure 1, the auding curve represents, at each grade level, the level to which reading skill would arise if, by some magical process, the person could be instantly taught reading decoding skills. Thus, if a person was very unskilled in auding, his or her reading potential would be said to be low, being limited by poorly developed oral language skills. On the other hand, persons highly skilled in auding would have the potential to become highly skilled in reading, and in a relatively brief time, because reading comprehension would be limited mostly by the fairly simple to learn decoding skills rather than by the more difficult to teach and to learn language comprehension skills and knowledge (vocabulary; concepts).

Figure 2 contrasts the reading potential concept as it might be assumed for children versus marginally literate adults. In the hypothetical case illustrated in Figure 2, a child who reads at the second grade level has a slightly higher auding score that translates to a reading

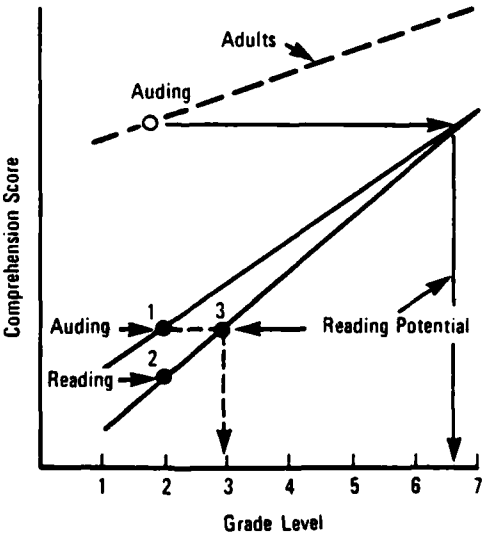


Figure 2. **Comparison of the reading potential concept applied to Marginally literate adults and to school children**

potential score of 3rd grade. The top dotted line illustrates the auding score as it might be assumed by techers in an adult basic skills program. For an adult student scoring on a reading test at the 2nd grade level, a fairly high level of skill in oral language comprehension is assumed, which in the case illustrated translates into a grade 6.5 reading potential level. Thus the adult reading at the 2nd grade level is thought to have over four times the reading potential (6.5-2=4.5 grades of reading potential) of the second grade student (3-2=1 grade of reading potential).

The foregoing concepts of reading potential appears to underpin, at least partially, the more-or-less common-sense belief that adult literacy students can acquire basic skills more rapidly than children in schools. It is thought that the adults' higher oral language skills and world experience gives them higher "reading potential" than elementary school children (Figure 2). In turn, this belief is reinforced through the use of grade-school referenced standardized tests that report gain in grade levels. Thus, when it is demonstrated that adults in a brief, concentrated program make 1 or 2 years gain in reading, this may be interpreted to mean that the adults learned as much in a few hours as children do both in and out of school in 1 or 2 years: "Adult learners, on an average, do progress faster than children if we can take the reading tests at face value." (Ryan and Furlong, 1975, p.178).

Research Comparing Children and Adult Basic Skills Students on Reading Potential.

Because of the centrality of the reading potential of marginally literate adults to the conduct and evaluation of adult basic skills programs in the Army, research was conducted (Sticht, 1982) to compare the

reading potential of children and Army literacy students empirically, so that one might know whether or not one should take the reading tests at face value when applied to adults.

Three studies were conducted to determine if (1) adult literacy students have greater reading potential than school children who score at comparable levels to the adults on standardized reading tests, and (2) adult literary students are more efficient learners than such children. These studies are described in detail in Sticht (1982). Briefly summarized, these studies, which used Army personnel who were enrolled in an experimental basic skills education program, showed that:

- Marginally literate men (MLM) reading at the 5th grade level on a standardized reading test performed comparably to typical 4th and 5th grade students on tests of comprehension by auding and reading when the materials were presented at 128 wpm. Thus the oral language skills of the MLM did not exceed those of the children.

- Marginally literate adult men reading near the 5th grade level performed more poorly than typical 5th grade students on tests of learning from audio-visual materials presented for simultaneous auding and reading at rates of 228 and 328 wpm.

- Marginally literate adult men showed approximately 0.5 to 1.0 years of reading potential when administered an auding and reading test that was standardized and normed on children in the grade schools. Actual reading scores were at the 5.0 level while reading potential scores were in the upper 5th and lower 6th grade range.

- Marginally literate adult men in a military job-related reading program of six-weeks duration showed a median gain of 0.7 grade levels in general reading and 1.6 grade levels in job-related reading of the type

being taught in the program. There was no relationship of reading potential to gain regardless of the students' entering reading skill levels. These studies, though limited in number and types of adult literacy students and grade school children involved, suggest:

- One should not take the reading tests based on children in the school grades at face value when applied to adult literacy students. Adult literacy students who scored at the fifth grade level on a standardized reading test normed on children were not as effective and efficient processors of oral and written language as were typical 5th grade children like those on whom the reading tests were normed.

- One should not assume that adult literacy students have greater "reading potential" than do grade school children who are at the grade level that adults score at on standardized tests. Marginally literate adults reading at the 5.0 level had auding scores that were also at the 5th grade level which, when converted to reading potential scores fell at the 6th grade level. This is far short of the 10th grade level, which represented the years of education completed by 80% of the students.

- One should not expect rapid, large increments in basic literacy skills of adult literacy students in brief, concentrated programs of general literacy. Such programs require that adult students have a fairly high level of oral language skills for large gains to be rapidly made in general literacy.

However, in the research of Study 3, marginally literate adults in a job-related reading program made twice the gain in job-related reading that they did in general reading, suggesting that more rapid learning of particular types of reading will occur when training is specifically focussed on that type of reading rather than on "general" literacy.

Hence, if adult literacy students need to read "functional" materials more than academic textbooks, it would seem more efficient to provide direct practice in reading functional materials than in reading "college prep" materials. The reading grade levels of most standardized tests are derived from school children using academically-oriented texts and exercises that require highly developed language and analytic reasoning skills for successful execution. Such skills, applicable in a wide-range of situations, would seem to be difficult for adult literacy students to develop in brief, concentrated programs.

Chapter 3

The Army Developmental Education Program for Performance and Training (ADEPPT)

Given the critique of the current BSEP of Chapter 1, and the concepts of basic skills development for adults reviewed in Chapter 2, the present project was initiated to develop a conceptual framework for the design and development of an on-duty program that will help soldiers acquire the competence that they need to perform in the Army in a thoroughly proficient manner. Specifically, as mentioned in Chapter 1, research was undertaken to design an on-duty education program that:

- Provides a continuum of opportunity to participate in on-duty education from the training base to the permanent duty station, and
- Provides a continuum of knowledge and skill development that accepts new accessions whose learning and literacy skills are underdeveloped, and systematically develops those skills in education programs that help soldiers acquire:
    - Knowledge and skills needed to succeed in the initial training environment and in the permanent duty station environment.
    - Knowledge and skills needed to learn and perform job tasks at skill levels 1 and 2 for persons in paygrades E1-E4.

- Knowledge and skills needed to satisfy academic credentials requirements for promotion to paygrades E5 and above.
- Knowledge and skills needed to learn and perform the duties of an NCO in training or permanent duty stations.

As indicated above, the concept of a continuum is two-pronged; to overcome the limitations of brief, one-shot, remedial programs, it is necessary that basic skills development be available in IET and later at the duty station so that soldiers have the opportunity for skills development. This provides a continuum of opportunity to participate in basic skills development programs. As Table 1 indicates, in Part III, the Army currently has a policy of providing basic skills training that is directly related to MOS training requirements in IET, and provides for on-duty basic skills programs at the permanent duty station. As mentioned in Chapter 1, however, at the present time there is no way of ensuring that soldiers actually participate in basic skills training at the IET post and then continue their training at the unit. This is primarily a problem of system information gathering, tracking, and management and is the subject of another effort (HumRRO Report entitled "A System Definition and Evaluation of Technology Alternatives for ACES." January 1982).

Given a continuum of opportunity for basic skills education, there remains a need for a curriculum that will provide a continuum of skill development for meeting the requirements of Army training and job performance in IET, at the unit, and for progression into the non-commissioned officers ranks. Inasmuch as the progression into the NCO ranks requires

a high school diploma or its equivalency, the continuum of skill development must not only develop the basic skills needed to succeed in Army training and job performance, but also those basic skills required to satisfy high school diploma requirements. Thus the on-duty basic skills education program will articulate more closely with off-duty high school completion programs. Table 1, Part III mentions the enlisted soldier's competency based education level (EXCEL) program that is aimed at overcoming the "disconnect" that currently exists between the on-duty basic skills education program and the off-duty high school completion program. A letter of instruction from the office of the Adjutant General of 30 June 1981 describes the EXCEL program as follows:

> "Concept: The Enlisted Soldiers' Competency-Based Education Level (EXCEL) is the minimum level of educational competencies necessary for soldiers to serve at MOS skill levels 1 and 2, through grade E-5. EXCEL Program:
>
> a. Provides testing and instruction to develop competencies for those who fall below this level.
>
> b. Replaces both the Basic Skills Education Program, Phase II (BSEP II) and the High School Completion Program (HSCP).
>
> c. Interrelates basic skills development in the training base and the Advanced Skills Education Program (ASEP).
>
> d. Fulfills the Army obligation to both high school and non-high school graduates by providing on-duty basic skills development for soldiers, grades E-1 through E-5, at permanent duty stations.
>
> Military related skills will be taught on-duty; diploma unique subjects will be offered off-duty.
>
> e. Focuses on functional skills directly related to military job performance and coping with everyday life in the military environment.
>
> f. Provides non-high school graduates and recipients of GED equivalency certificates an opportunity to earn a high school diploma through a combination of on-duty/off duty study." (Letter Level Project, Department of the Army, Office of the Adjutant General, 30 June 1981).

The ADEPPT Continuum

The Army Development Education Program for Performance and Training (ADEPPT) builds upon the EXCEL concept of interrelating basic skills education in IET with the advanced skills education of the ASEP, and of focussing basic skills education upon requirements for such skills in the Army. To accomplish the interrelating of IET, EXCEL, and ASEP it was first necessary to define what it means to say that a soldier has access to a "continuum of development." This was taken to mean that the soldier develops skill in the processes of reading, writing, speaking, listening, computing, learning, and problem solving by applying those skills to various tasks in IET, at the Unit, and in preparing for NCOES in the ASEP. Further, the types of tasks that a soldier encounters in IET and at the Unit can be grouped together to form domains of knowledge and skill combinations that the soldier draws on in learning in training programs and in performing on the job. A continuum of development thus involves two facets: the learning of knowledge and the improvement in using that knowledge by the basic skills listed above.

The major distinction between the ADEPPT and previous and current concepts of basic skills education in the Army lies in the specific recognition of the role of knowledge and task performance in developing basic skills. Previous concepts have thought of the basic skills in the abstract, independent of the thoughts or tasks involved in any actual use of the basic skills. The ADEPPT concept is that knowledge and skill are two sides of the same coin, and that both develop through the performance of tasks. In developing the ADEPPT continuum therefore, it was first necessary to identify the types of tasks that soldiers encounter in IET, the Unit, and in NCO positions, to then identify the domains of knowledge

into which the tasks could be grouped, and to then specify the domains of knowledge, basic skills, and types of tasks that are most important for IET, the Unit and later on for preparing for NCO positions.

Approach

To identify the tasks and knowledge domains that Army personnel encounter and learn in their military career (first term), several activities were undertaken:

A. Identification of levels of basic skills and knowledges needed to progress in an Army career to include those necessary for:

- Current MOS job performance.
- Paygrade advancement and eligibility for re-enlistment.

This subtask was accomplished through:

1. Review of representative soldiers' manuals and relevant policy documents (e.g., AR 600-200).

2. Interviews with ACES personnel and other cognizant military personnel.

B. Review of the literature on Adult Performance Level (APL) research (Appendix A), competency based education, and life coping skills in military and civilian settings. The foregoing projects have dealt with education that combines basic skills and knowledge as in the ADEPPT. Specific activities included:

1. Site visit to Fort Bliss, El Paso, Texas to observe the Army civilian life-role program incorporating features of APL and examination of curriculum material used there (Fort Bliss APL Project Staff, undated). Discussion of this project appears as Appendix A.

2. Site visit to Headquarters USAREUR, Heidelberg, Germany to discuss the on-going life-coping skills project of the Army Research Institute's USAREUR Field Unit and review of the literature produced by the project. Life coping skills identified in that project appear as Appendix B.

3. Site visit to the Job-Oriented Basic Skills (JOBS) program, Navy Recruit Training Center, San Diego, California. The JOBS program combines basic skills and knowledge development oriented toward Navy jobs, as in the approach to IET basic skills training used in the Army's earlier Advanced Individual Training Preparatory Training (AITPT) program.

C. Analysis of the requirement for a High School diploma to identify those components which overlap with the military objectives of EXCEL, through:

1. Discussion with cognizant ACES personnel.

2. Review of the GED high school equivalency curriculum and assessment instruments (General Education Development Testing Service 1979, a,b). (Appendix E).

D. Identification of samples of specific tasks involving basic skills application to knowledge bases in IET, the Unit, and in NCOES.

Results

One of the first tasks listed above was to identify the levels of basic skills needed to progress in an Army career. Figure 3 shows the requirements for promotion for pay grades E-1 to E-6. The first specification of an education level is in promotion from E-4 to E-5, where it is indicated that completion of the 8th grade or possession of a GED equivalency certificate is required. For advancement from E-5 to E-6, a high

Requirements for Promotion, Pay Grades E-2 – E-6 as Given in Army Regulation 600-200 Enlisted Personnel Management System

E-1 Advancement to E-2	E-2 Advancement to E-3	E-3 Promotion to E-4	E-4 Promotion to E-5	E-5 Promotion to E-6
6 months in service*	12 months in service*	24 months in service*	Promotion made against point cutoff criteria	Promotion made against point cutoff criteria
Promotable** →	4 months in grade*	6 months as E-3* & serving as E-3 →	Eligible: 3 months in service* 8 months as E-4 & serving as E-4	Eligible: 84 months in service* 10 months as E-5 & serving as E-5
	Promotable**	Appropriate security clearance	Recommended by Unit Commander	Recommended by Unit Commander
		Promotable**	Appearance before selection board	Board appearance
			Fully qualified in MOS at higher grade	Fully qualified in MOS at higher grade
			OJE or NCOES requirements	*OJE or NCOES* requirements
			SQT score of at least 60***	SQT score of at least 60***
			Completion of 8th grade or GED	Completion of High School or GED
			Position vacancy	Position vacancy
			Security clearance	Security clearance
			Physical qualification	Physical qualification
			Promotable** →	Promotable**
(page 7-3)	(page 7-4)	(page 7-4)	(pages 7-5 – 7-6)	(pages 7-4 – 7-6)

*May be accelerated (pages 7-3 – 7-6)

**For reasons soldiers are not promotable, see AR 600-200 page 7-2 to 7-3.

***May be waived.

Figure 3

school is required. Thus, in terms of education levels, basic skill levels of 8th grade or 12th grade level are required for promotion from E-4 to E-5 and from E-5 to E-6, respectively. These requirements indicate the need to include an academic domain of knowledges and skills in the ADEPPT.

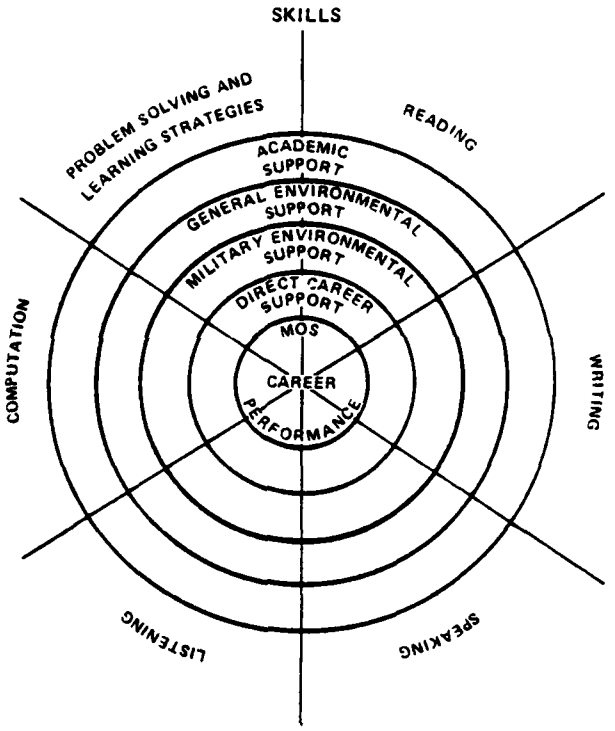
Review of sources listed in Table 2, research projects on functional literacy and life coping skills, and the site visits listed above led to the formulation of domains of knowledges and basic skills in addition to the academic domain suggested by the Army's promotion requirements. Altogether, including the academic domain, five (5) domains of knowledges and skills were formulated to subsume the Army's requirements for basic skills development.

Figure 4 summarizes the five knowledge and basic skills domains formulated as the basis of the ADEPPT curriculum. The domains are represented as a set of concentric circles, each comprised of a domain of knowledge. Intersecting the circles are the basic skills: reading, writing, listening, speaking, computing, learning, and problem solving. In general, the further a domain (represented by a concentric ring) is from the center of the circle, the less diret and specific is the support it gives to MOS performance. Nevertheless, some degree of mastery of each domain is necessary for on-the-job functioning. Within each domain are topic areas, closely related bodies of knowledge, which a soldier must utilize in order to achieve a goal, e.g., pass the SQT test or behave appropriately, e.g., obey traffic laws. To perform successfully with regard to a topic area a soldier must operate as a problem solver. Problem solving in these domains requires utilization of basic skills involving information pick-up through language, i.e., auding and reading and information production through language, i.e., speaking and writing; special rules

Table 2

Sources used in formulating the knowledge and skill domains of Army Developmental Education Program for Performance and Training

DOMAIN	SOURCE OF INFORMATION
MOS Career Performance	Soldier's Manual of Common Tasks Skill Level 2, Skill Levels 2, 3, and 4, Headquarters, Department of Army 21-2 and FM 21-2, May 1981.
Direct Career Support	Enlisted Personnel Management System, United States Department of the Army, Army Regulation No. 600-200, 1981.
Military Environmental Support	An Investigation of Coping and Adaptation in USAREUR, Human Resources Research Organization, Parts I, II and III. Unpublished draft report, 1981. (See Appendix B).
General Environment Support	APL Scope and Sequence Charts, Adult Performance Level Project Staff, Austin, Texas: University of Texas, 1977. Fort Bliss APL Project Staff, unpublished curriculum material, 1981.
Academic Support	ASVAB Counselor's Guide, Military Enlistment Processing Command, Fort Sheridan, Illinois, 1979. Interim Examiner's Manual for the Tests of General Educational Development, General Educational Development Testing Service, Washington, D.C.: (American Council of Education, 1979. (See Appendix E). Official GED Practice Test, Forms A and B, General Educational Development Testing Service, Washington, D.C: American Council on Education, 1979.



MOS Career Performance: The actual performance of MOS tasks.

Direct Career Support: Those tasks which are necessary for MOS career promotion and advancement, but do not involve job task performance, e.g., appearance before Promotion Board.

Military Environmental Support: Those tasks and procedures specific to the Army, which are necessary for successful functioning, but are not directly related to career advancement, e.g., obeying barracks rules.

General Environmental Support: Those competencies a soldier must possess for successful adult functioning which are not specific to the military, e.g., budgeting money.

Academic Support: The basic skills and subject knowledge taught in schools and required for high school graduation.

Figure 4. **Knowledge and Basic Skill Domains Identified for the Army Developmental Education Program for Performance and Training (ADEPPT).**

for solving problems dealing with quantities, i.e., computation; and the use of general problem solving and learning strategies. These skills are represented in Figure 4 by the segments of the circle, each of which involves all five domains of knowledge.

Given each of these five major domains of knowledge, a continuum of knowledge development in each domain that begins in IET and is continued at the Unit can be developed. Thus, in addition to a continuum of opportunity for access to education there exists a continuum of knowledge development from IET to the Unit comprised of MOS/NCO skill level knowledge, Military and Civilian Environment-related knowledge and Academic credentials-related knowledge. Figure 5 summarizes this concept of a continuum of opportunity and five knowledge domains, which, when integrated into a soldier's existing knowledge, produces a new continuum of knowledge development from IET to the Unit. This continuum is discussed in detail in the next section.

Basic Skills and Knowledges Domains for the ADEPPT

Figure 5 represents the concept of the ADEPPT as a continuum of skills and knowledges in five domains developed in IET, the Unit, and the ASEP. This continuum was developed taking into consideration that knowledge and skill demands change as a soldier's career progresses. However, central to the soldier's career is the need to learn and perform essential job tasks, and to perform the essential tasks needed to live in a military environment. These are the major changes that take place when the new recruit first enters the Army. Unless the new enlistee can survive the IET environment, there will be no further Army career. Therefore, the ADEPPT aims first to assist in the completion of Basic Training and Advanced

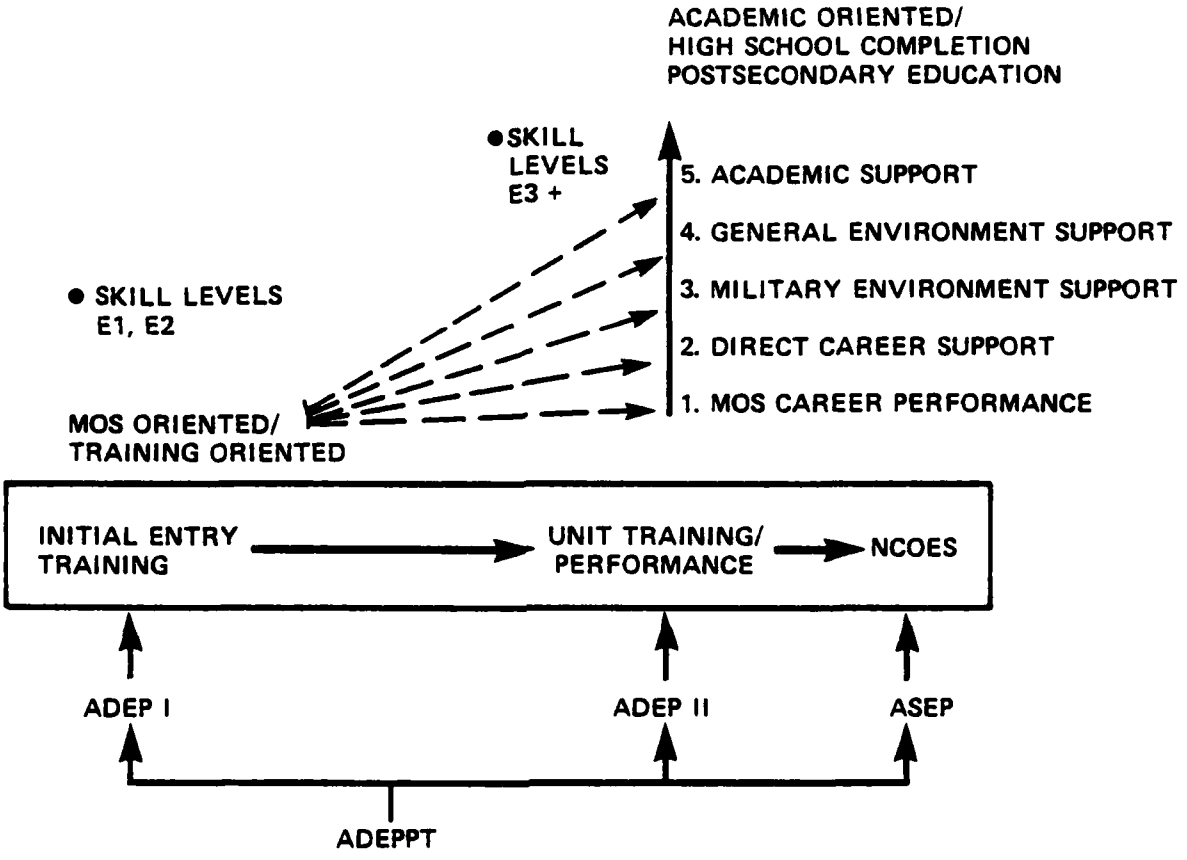


Figure 5. Army Developmental Education Program for Performance and Training (ADEPPT)

Individual Training through the focus of basic skills education upon the training and MOS-oriented skills needed to succeed in BT and AIT.

Table 3 presents a detailed analysis of the ADEPPT cotinuum, and provides examples of the types of basic skills tasks likely to be usefully developed in each ADEPPT component located in either IET or the Unit. In IET, the Army Developmental Education Program (ADEP I) has the primary objectives of assisting new recruits to successfully complete BT and AIT, and secondary objectives of preparing the new recruit for future MOS performance and adjustment to the Army. The primary means of identification of ADEP I students is through instructor referral, whose jdugments may take ASVAB scores (AFQT;GT) into consideration. Recruits might also volunteer for ASEP I, though such self-selection would require supervisor approval.

The domains of knowledges and skills emphasized in ADEP I are MOS Career Performance, Direct Career Support, and Military Environment Support in AIT or OSUT. Figure 5 shows that ADEP I in IET is MOS and training oriented. The dotted lines (arrows) are meant to indicate that the development education that focuses on domains 1, 2, and 3 in IET are continued in ADEP II. Additionally, the dotted arrows going from IET to the Unit to domains 4 and 5 are meant to represent the fact thai there is some generalization from ADEP I with its focus on domains 1, 2, and 3 to the domains of General Environmental Support and Academic Support. This generalization results from the practice in performing the basic skills tasks in the military functional domains, because all such tasks have some elements of a more generally occuring nature. For instance, improved word recognition skills due to reading MOS oriented materials can be expected to generalize to some degree to the knowledge and skill domains for General Environment Support and Academic Support. The tasks in the latter domains include many

Table 3

Detailed Analysis of ADEPPT in IET, the Unit, and in the ASEP

Location	IET		Unit							Unit				
ADEPPT	ADEP I		ADEP II							ASEP				
REQUIREMENT	Basic Training (BT)	AIT or USUT	OJT and on going job performance	ON duty functioning	ASVAB score upgrading	SQT pass	High School or GED diploma	MOS skill improvement training (NCOES)	Leadership training (NCOES)	Performance at Skill Level 3+	Advanced MOS skills training (NCOES)	Advanced leadership training (NCOES)	Continued all duty functioning	Obtain Associate Degree
TIME	First 6 weeks	After BT	After IET, continuing through Skill Level 2	After IET, throughout career	When higher score is required, e.g., for promotion, tech training	Before next SQT Test (throughout career)	Before promotion to Skill Level 3	Late Level 1 (E 3, 4) Level 2	Late Level 1 (E 3, 4) and Level 2	Skill Level 3 and above	Skill Level 3 and above	Skill Level 3 and above	Skill Level 3 and above	Before 15th year of service
OBJECTIVE	Reduced IET attrition Future adjustment to Army	Reduced attrition Future MOS performance	Successful MOS performance	Successful military and life functioning	Desired score	SQT pass	Receipt of Diploma or GED	Training course completion Future job performance	Training course completion Future NCO performance	Successful performance	Course completion Future MOS performance	Course completion Future leadership performance	Successful functions in Military & Civilian worlds	Receipt of Degree
POPULATION	Low ASVAB or other test Instructor identified Volunteers	Low ASVAB or other test Instructor identified or Flagged in BT Volunteers	Poor performance (referral) Flagged in IET Low ASVAB Volunteers	Adjustment problems Trainees who fail competence tests	Score below what needed or desired	Previous SQT failure Flagged in previous program Low ASVAB	Non High School Graduates	Identified by training instructor, and Volunteers	Identified by training instructor; and Volunteers	Identified by supervisor, training instructor Volunteers	Identified by instructor, supervisor, Volunteers	Identified by instructor, supervisor Volunteers	Volunteers	Identified by instructor Volunteers
DOMAIN(S) EMPHASIS	Military Environmental support	MOS performance Direct career support	MOS performance	Military and general environmental support	Academic support	Direct career support MOS performance	Academic support	Direct career support Mos performance	Military Environmental support MOS performance Direct career support	MOS performance Military environmental support	MOS performance Direct career support	MOS performance Direct career support	Military and general environmental support	Academic support
SKILLS														
Reading	"Smart" Book Maps	Job reading tasks Training materials	Job reading tasks Job materials	Functional documents Legal terminology	Vocabulary (general) Comprehension skills Word problems	SQT notice Material to be studied	Texts in subject areas, reading passages on tests.	Job training materials New job concepts	Course reading New concepts	Military policy, regulations etc New MOS documents	Course reading Advanced job concepts	Course reading, advanced management, etc Concepts	Advanced functional documents	Complex academic reading New Concepts
Writing	Phonetic Alphabet	Job forms	Job forms Letter, reports etc.	Forms (Military and Civilian)	Learning Exercises	Notes, outlines, etc.	School reports, short answers, grammar	New job document	Learning to write reports, evaluation, etc. Grammar	Reports, evaluations, etc. Grammar	New job documents	Evaluations, reports, etc	Variety of forms requests for information etc	Essays, papers, etc.
Speaking	Phonetic etc	Job vocabulary Job concepts	To seek and give information relating to job Grammar	To seek and give information relating to functional area	(None emphasized)	Varies with MOS	Possibly oral presentations	Grammar	Giving instructions, training lectures, orders, briefing, etc	Instructions, orders, explanations, training lectures, etc. Verbalization of exp	Instructions, orders, explanations, etc	Training lectures, instructions, orders	Family communications, other functional areas	Oral presentations Class discussion
Listening	Military vocabulary, concepts	Job vocabulary Job concepts	OJT, instructions, orders, etc.	Information related to area	Following directions	Following directions	Lectures on subject areas	Class lectures New job concepts	Class lectures New concepts related to leadership	Requests for information, help, etc.	Class lectures Advanced job concepts	Class lectures Requests for help information, etc.	Family communications Other areas	Classroom lectures on advanced material, new concepts
Learning Strategies	From lectures and smart book	Lectures Training materials	Learning through performance	Learning through experience	Learning of vocabulary and math	Study skills	Learning sub parts from lectures and texts	Learning from lectures, training materials	Learning from lectures, training materials	Learning thru paper, learning to teach	Learning from lectures, written materials	Learning from lectures, mat., etc Learning to teach	Learning thru experience	Learning difficult material thru reading, listening
Problem Solving	Concepts for future problem solving	Concepts for future MOS problem solving	Increased understanding for future independent performance	Independent adult functioning	Using what learned for test taking	Using information learned for test performance	Answering questions on tests, reports, essays, etc.	Understanding for future problem solving	Understanding for future problem solving in management, supervision, etc.	Independent problem solving in MOS and as supervisor, explaining to others	Understanding for future problem solving	Problem solving involving others, human relations	Problem solving involving life planning	Verbal reasoning about material
Computation	Map computations	Varies with MOS	Varies with MOS Math as real situation	Consumer economics	Computations Word processing	Varies with MOS Scheduling Study time	High School Math	Varies with MOS	Varies with MOS	Varies with MOS Should be able to help others	Varies with MOS	Varies with MOS	Advanced practical math and financial planning	Advanced math Math for other courses

of the same vocabulary items found in MOS technical materials, the same grammatical constructions, the same analytical skills, etc. Thus ADEP I should make greatest improvement in domains 1, 2, and 3, while making at least some improvement in domains 4 and 5 (evidence for the generalization from job-oriented basic skills training to general reading was found in the Army's research program to develop the Functional Literacy (FLIT) program subsequently became the AITPT, See Chapter 1).

Table 3 also shows examples of tasks found in BT and AIT/OSUT that require applications of basic skills. Chapter 4 provides a more detailed discussion of objectives for ADEPPT in each of the five domains of Figure 4 that may require teaching in ADEP I in IET. For the most part, however, it is anticipated that ADEP I will be based on the "remedial loop" concept currently in practice at certain Army posts. At Fort Dix, for instance, the basic skills instruction is very closely linked to the instruction in the AIT in which a soldier is enrolled. If a trainee is having difficulty with some unit or module of MOS instruction, he or she may be referred to the on-site basic skills instructor who targets basic skills instruction on just those skills and knowledges needed to succeed in the particular unit or module of MOS instruction that is posing problems for the student. In this delivery system ADEP I is an integral part of the IET training program and makes a direct contribution to helping the trainee succeed in IET. A more detailed description of the "remedial loop" program at Fort Dix is given in Appendix A.

The Army Developmental Education Program in the Unit (ADEP II). Table 3 presents an analysis of the various requirements that a soldier encounters in the unit for which some aspect of basic skills education may be useful. This analysis reveals the complexity of unit performance in relation to

basic skills education. ADEP II must be designed to assist a soldier in learning and performing his or her job at the unit, function well off-duty so that job performance does not suffer, upgrade the ASVAB if career progression so requires, pass Skill Qualification Tests, attain a high school diploma or GED equivalency, and prepare the soldier for future responsibilities in MOS and leadership skills.

For the seven categories of requirements in the unit that ADEP II might be expected to help in meeting, there are seven general objectives for ADEP II given, an indication of the population(s) that might be involved in ADEP II for each objective, the ADEPPT knowledge and skill domain(s) emphasized for each objective, and examples of the types of tasks requiring basic skills that are performed in meeting the seven requirements for unit performance and training, and career progression. A more detailed listing of objectives for ADEPPT is given in the following chapter.

ASEP (Advanced Skills Education Program). The ASEP is also presented in Table 3. Requirements, the ASEP objectives to meet the requirements, the populations that might be served by ASEP, and the domains of knowledge and skills that are emphasized in each objective are presented. Additionally, as with ADEP I and ADEP II, examples of tasks under each objective requiring applications of basic skills are given.

Appendix C presents a discussion of the rationale behind the ADEPPT continuum outlined in Table 3. Details of the ASEP are presented in the ASEP Handbook distributed by ACES.

Chapter 4

Terminal Objectives for the ADEPPT Domains of Knowledges and Skills

Introduction

In Chapter 3 the ADEPPT continuum of knowledges and skills that soldiers are required to perform in IET and at the unit was introduced. The five domains of knowledges and skills are summarized in Figure 4 of Chapter 3. Additionally, Table 3 of Chapter 3 presents an analysis of the basic career requirements that soldiers encounter in IET and at the unit. Also, objectives for basic skills development are identified and one or more of the ADEPPT knowledge and skill domains are identified as encompassing the tasks involved in achieving the specified objectives. Finally, Appendix C presents an extended discussion of the rationale involved in constructing Table 3.

In the present chapter, the discussion of the five ADEPPT domains is continued, with the goals of developing terminal objectives that can serve as measurable objectives for each of the five domains of Figure 4, and that can provide the basis for curriculum development to instruct soldiers whose measured competencies indicate that they could benefit from instruction in one or more of the five domains of the ADEPPT continuum.

ADEPPT Terminal Objectives

Using the five domains of Figure 4, Chapter 3, terminal objectives were developed for the ADEPPT continuum. For each of the five domains, a different document or set of documents, identified by our literature review, serve as the primary source(s) of information for identification of the topic areas, objectives and example tasks. These documents are listed in Table 2, Chapter 3.

The terminal objectives are presented in the form of a real-world goal or mastery of a real-world topic area. Although for each area one or two examples are given of the application of a basic skill within that area or in the service of that goal, terminal objectives are not specified in terms of a unique use of a basic skill. The reason for this is that in the real-world outside of schools, basic skills are virtually always used in combination. For example, the completion of an income tax form requires a combination of reading, writing, problem solving and computation. Furthermore, an attempt to specify all the particular skill uses which could be required of a soldier within a topic area would lead to a list far too long and detailed for our purposes here and would still not be exhaustive. The specification of particular tasks by which a soldier could demonstrate skill and topic area mastery in the classroom is really work for the curriculum developer and again would produce a list far longer than presently required.

In the following pages, terminal objectives are presented for each of the five domains of Figure 4: MOS Career Performance; Direct Career Support; Military Environment Support; General Environment Support; and Academic Support. For each domain there are provided the topic areas and corresponding basic skills that are to be developed by the soldier through application in a given topic area. Additionally, examples of specific objectives and skill application to these topic areas are presented.

As an example of how one should read these displays of ADEPPT Terminal Objectives, a "walk-through" for the first domain follows:

(1) The Domain Title: The first Domain is titled MOS Career Performance. This domain is blackened in the circle for ready reference.

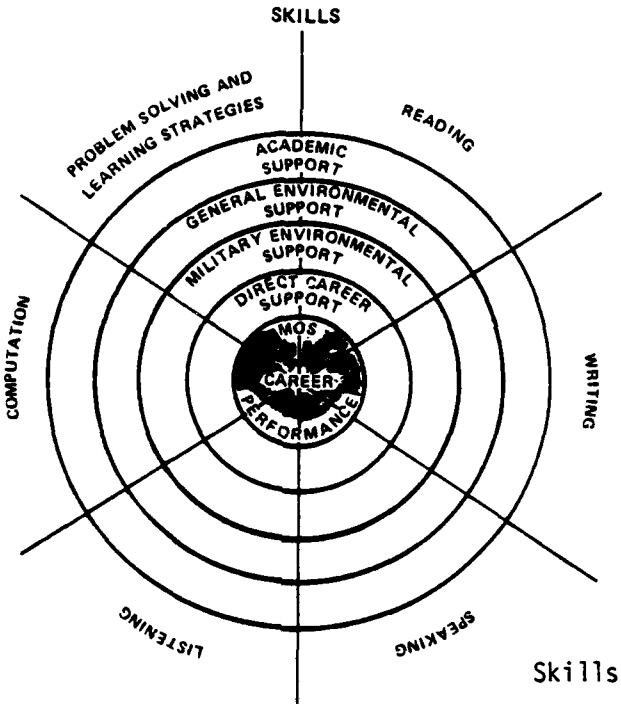
(2) Topic Areas: These represents the important topics or tasks which the soldier may encounter within each domain.

(3) Skills: The six basic skills remain the same for each domain.

(4) The numbered objectives specify the task involved in each topic area in terms of a goal, performance or behavior. For example, objective (2): "Install, repair and use field communication devices" corresponds to the topic area "Field communications devices" specified in terms of observable behaviors on the part of the soldier.

(5) Under each objective are one or two examples of how a soldier might apply a basic skill in his or her performance of that objective. For instance, under objective (1) "Identify enemy vehicles and activities and report on them", the example skill uses are "Writes report on observed enemy activities", and "applies learning strategies to learn features of threat armored vehicles."

DOMAIN: MOS Career Performance



Topic Areas:

Common Task

1) Identification of and report on enemy vehicles and activities
2) Field communication Devices
3) Navigation by compass and maps
4) Maintenance and use of weapons
5) Survival in combat
6) Protection against NBC attack
7) Combat First Aid
8) Customs and Laws of War
9) Physical fitness:
10) Troop Leadership (Level 2 only)

MOS Specific Tasks

11+) Dependent on MOS

Skills:

a) Problem solving and learning strategies
b) Reading
c) Writing
d) Speaking
e) Listening
f) Computation

Objectives

Soldier applies skills of problem solving and learning strategies, reading, writing, speaking, listening and computation to:

(1) Identify enemy vehicles and activities and report on them. Examples: Writes report on observed enemy activity. Applies learning strategies to learn features of threat armored vehicles.

(2) Install and repair and use field communication devices.

Examples: Uses prowords correctly (speaks). Finds item number of CE01 extract on appropriate chart (reads). (Level 2 only)

(3) Orient himself and use compass and map.

Examples: Computes map distance from pace count. (Level 2)
Uses problem solving strategies to determine direction without a compass.

(4) Maintain and shoot prescribed weapons.

Examples: Reads and follows procedures for performing operator's maintenance on M16A rifle. Uses problem solving strategies to identify and correct defects in grenades.

(5) Survive in combat.

Examples: Responds correctly to password (listens). Write a PW tag. (Level 2)

(6) Protect against NBC attack.

Examples: Identifies and reacts appropriately to nuclear hazard (problem solving). Gives appropriate orders to insure safe unmasking (speaking). (Level 2)

(7) Perform combat first aid.

Examples: Listens to soldier describe symptoms of heat injury. Applies learning strategies to learning CPR.

(8) Abide by laws and customs of war.

Examples: Reads list of forbidden targets. Interrogates prisoner correctly (speaking and listening).

(9) Maintain appropriate level of physical readiness.

Examples: Computes standards for self on APRT. Reads FM21-20.

(10) Lead a troop.

Examples: Reads applicable TM for supervising maintenance. Chooses suitable training method (problem solving). (Level 2)

Soldier applies skills of problem solving and learning strategies, reading, writing, speaking, listening and computation to:

(11+) Perform tasks of his MOS.

Examples: Problem solving: Selects appropriate procedure, determines source of malfunction.

Learning strategies: Learns MOS specific material in SM.

Reading: Reads procedural checklist.

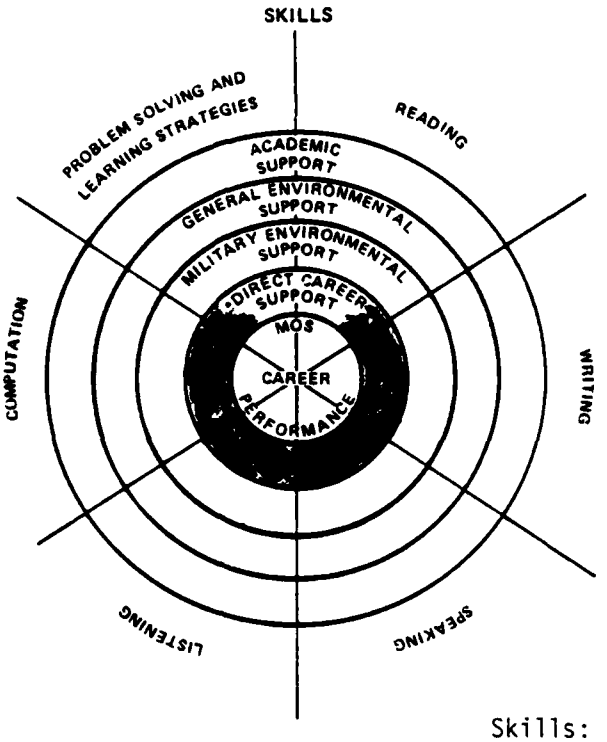
Writes: Fills out form.

Speaks: Reports problem to superior.

Listens: Listens to task description by more experienced soldier.

Computes: Computes amount of material needed for task.

DOMAIN: Direct Career Support



Topic Areas:

1) SQT
2) Other promotion requirements
3) Knowledge of own MOS and Army MOS system
4) Education and Training opportunities in military
5) Re-enlistment

Skills:

a) Problem solving and learning strategies
b) Reading
c) Writing
d) Speaking
e) Listening
f) Computation

Objectives

Soldier applies skills of problem solving and learning strategies, reading, writing, speaking, listening and computation to:

(1) Successfully pass SQT tests. Examples: Reads SQT notice with comprehension and takes appropriate action. Uses learning strategies to study Soldier's Manual.

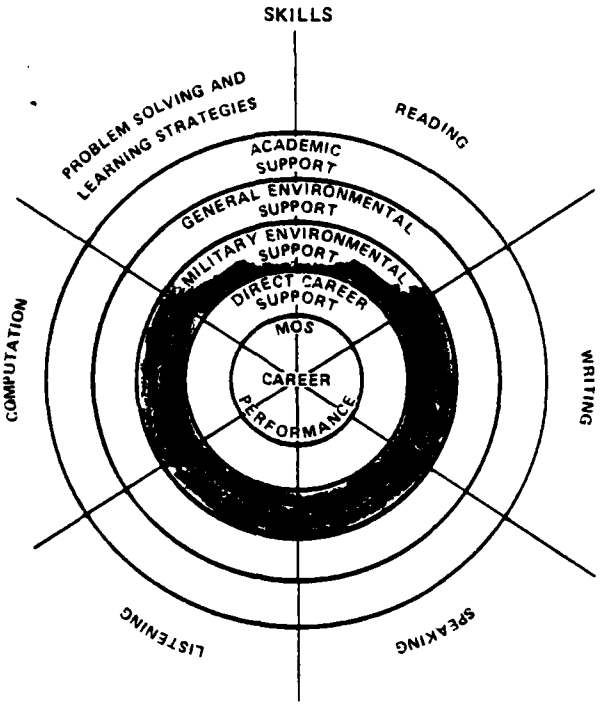
(2) Complete other requirements for promotion. Examples: Computes number of promotion points still needed. Behaves appropriately at appearance before Promotion Board. (speaking and listening).

(3) Demonstrate knowledge of own MOS and Army MOS system.
Examples: Relates own MOS to Army mission (problem solving). Writes request for cross-training.

(4) Appropriately utilize available educational and training opportunities offered by Army.
Examples: Reads description of ESO courses. Listens to advice of educational counselor.

(5) Make informed decision about re-enlistment and, if positive, fulfill requirements.
Examples: Uses problem solving strategies to decide whether to re-enlist. Writes request for withdrawal of re-enlistment bar.

DOMAIN: Military Environmental Support



Topic Areas:

1) Military Code of Justice
2) Contract with Army
3) Army as combat organization (first aid, security procedures, etc.)
4) Army pay grade and Leave and Earnings Statement
5) Military benefits and resources available to soldiers
6) Procedures for getting things done in Army (e.g., chain of command, rules for use of facilities, etc.)
7) Rules governing living together in Army (e.g., barracks rules, sexual harassment, etc.)
8) Individual soldier as representative of Army (bearing, uniform, etc.)
9) Miscellaneous (e.g., bulletin board, travel orders, military time, physical training, etc.)

Skills:

a) Problem solving and learning strategies
b) Reading
c) Writing
d) Speaking
e) Listening
f) Computation

Objectives

Soldier applies skills of problem solving and learning strategies, reading, writing, speaking, listening and computation to:

(1) Understand and adhere to Military Code of Justice.

Examples: Soldier reads article 15 of UMCJ. Soldier determines if particular offense warrants court martial or article 15 (problem solving). Soldier complies with request of Military Policeman (listening).

(2) Understand and adhere to his contract with the Army.

Examples: Soldier determines consequences of non-compliance with contract (problem solving).

(3) Recognize that the Army has a war time mission and what the implications are for him.

Examples: Soldier listens to briefing on security procedures in case of bomb threat. Soldier applies learning strategies to learning combat first aid procedures.

(4) Understand Army Pay Grade System and Leave and Earnings Statement.

Example: Soldier computes that there is an error in LES.

(5) Recognize and utilize military benefits and resources (agencies) available to him.

Examples: Soldier decides it is necessary to seek help from JAG. (problem solving). Soldier computes amount of potential retirement benefits. Soldier describes symptoms to medical personnel (speaking). Soldier writes medical form.

(6) Follow correct procedures for accomplishing things in Army.

Examples: Soldier fills out form requesting leave (writing). Soldier decides when and how to utilize chain of command (problem solving). Soldier speaks appropriately to superior officer.

(7) Abide by regulations and principles for living with fellow soldiers.

Examples: Soldier reads barracks rules at new duty station. Soldier decides how to deal with sexual harrassment (problem solving).

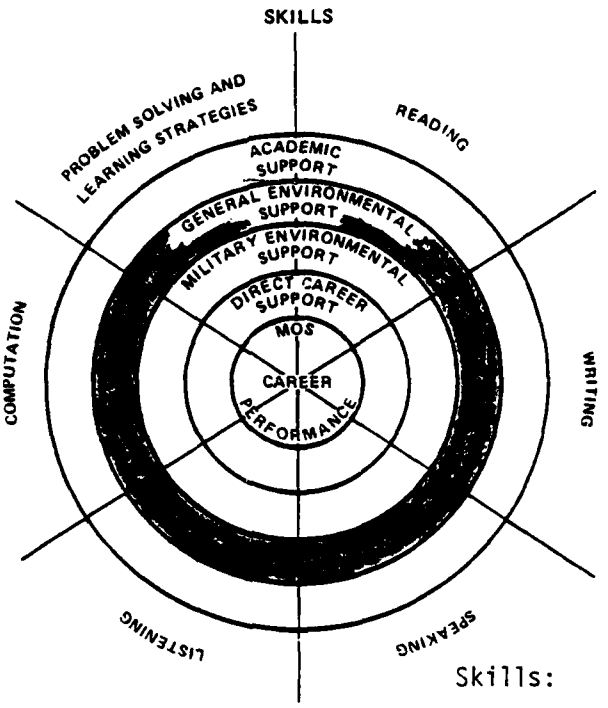
(8) Properly represent the Army through behavior and demeanor.

Examples: Soldier listens to lecture on military bearing. Soldier reads and follows directions about uniform. Soldier speaks courteously to civilians.

(9) Perform miscellaneous tasks and procedures associated with or specific to military.

Examples: Soldier reads bulletin board and extracts information necessary. Soldier performs computations with military time and Julian date.

DOMAIN: General Environmental Support



Topic Areas:

Government and Law

1) Current Events
2) Voting
3) Rights of citizen
4) Laws and legal documents
5) Taxes

Consumer/Financial

6) Shopping and Sales Practices
7) Housing Needs
8) Financial Affairs

Community Resources

9) Information sources
10) Recreation
11) Transportation

Health

12) Hygiene, Nutrition and Fitness
13) First aid and safety
14) Illness and medical care
15) Substance abuse
16) Mental Health
17) Interpersonal and family relations

Skills:

a) Problem solving and learning strategies
b) Reading
c) Writing
d) Speaking
e) Listening
f) Computation

Objectives

Soldier uses skills of problem solving and learning strategies, reading, writing, speaking, listening and computation to:

(1) Derive implications of current events for his life.
Examples: Listens to news. Forms opinion about world events (problem solving).

(2) Vote.
Examples: Write for absentee ballot. Read description of election issues.

(3) Exercise rights of citizen.
Examples: Recognize violation of own rights (problem solving).

(4) Abide by laws and understand legal documents.
Examples: Reads insurance policy. Answers questions asked by policeman (speaking and listening).

(5) Pay appropriate taxes.
Examples: Computes amount owing on income tax form. Calls IRS with question (speaking and listening).

(6) Shop wisely.
Examples: Computes unit price. Reads classified advertisements.

(7) Find housing to meet needs.
Examples: Calls landlord and asks about apartment (speaking and listening). Reads lease.

(8) Manage finances and utilize available banking services.
Examples: Writes withdrawal slip. Draws up budget (problem solving).

(9) Utilize available information and communication services.
Examples: Obtains information from operator (listening). Finds book in card catalogue of library (reading).

(10) Take advantage of recreational opportunities.
Examples: Computes cost of sports tickets. Writes for tickets.

(11) Select and use appropriate public and private transportation.
Examples: Uses learning strategies to learn "Rules of Road" for locality. Figures out best bus to take (problem solving).

(12) Practice good rules of hygiene, nutrition and physical fitness.
Examples: Computes number of calories eaten in week. Listens to lecture on venereal disease.

(13) Follow first aid and safety procedures.
Examples: Identifies unsafe practices and remedies them (problem solving). Describes condition of accident victim to doctor on phone (speaking).

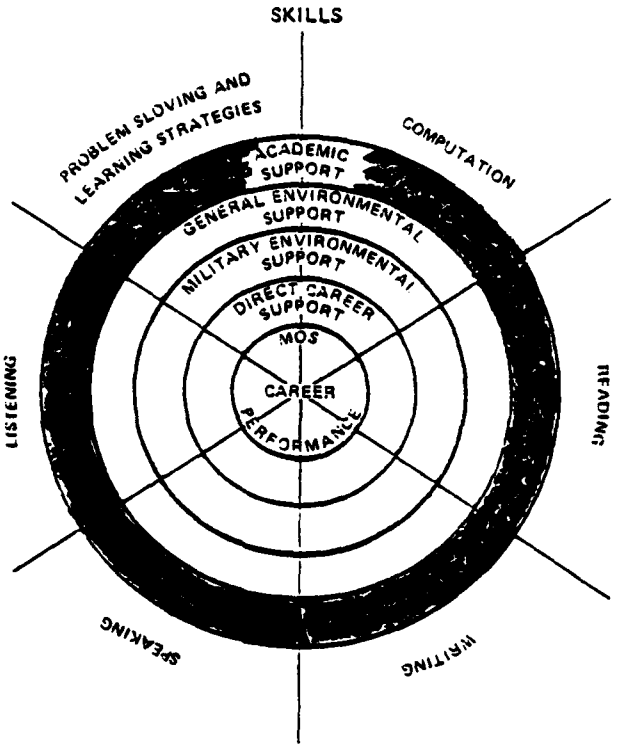
(14) Seek appropriate medical care for illness.
Examples: Decides if symptoms warrant professional help (problem solving). Reads label on medicine bottle.

(15) Understand consequences of substance abuse.
Examples: Reads article about cancer and tobacco. Decides not to drive when drinking (problem solving).

(16) Deal with emotional problems and seek professional help if warranted.
Examples: Describes problems to counselor (speaking). Figures out why feels depressed (problem solving).

(17) Have good interpersonal and family relationships.
Examples: Discusses sources of friction with wife (listening and speaking). Compliments buddy (speaking).

Domain: Academic Support



Topic Areas:

1) Vocabulary
2) Rules for language use
3) Rules specific to written language
4) Reading comprehension
5) Information analysis and use
6) Information integration
7) Interpretation of graphic displays
8) Selection and performance of appropriate computation

Skills:

a) Problem solving and learning strategies
b) Reading
c) Writing
d) Speaking
e) Listening
f) Computation

Objectives*

1. Soldier demonstrates attainment of a level of general vocabulary knowledge considered desirable for success in Army. (i.e., equivalent to GT > 90)

Examples: Uses word correctly in speech (speaking). Selects correct synonym on test (problem solving).

*Since the topic areas in this domain are themselves skill components, our usual format of: "Soldier applies basic skills to achieve goal" did not seem appropriate.

2. Soldier demonstrates mastery over grammar and rules for language use at a level appropriate for a high school graduate.

Examples: Writes grammatical essay. Speaks acceptable English.

3. Soldier demonstrates mastery of rules of spelling, punctuation and capitalization at a level appropriate for a high school graduate.

Examples: Picks out incorrectly spelled word (reading). Correctly puts punctuation at end of sentence (writing).

4. Given written material of appropriate difficulty in literature, social studies and science, soldier demonstrates reading comprehension through picking out main idea, and details, recognizing relationships, interpreting language and arriving at conclusions.

Examples: Paraphrases point of science article read. Reads story and writes summary.

5. Soldier demonstrates ability to analyze and apply newly presented general, social studies and scientific information.

Examples: Having just learned meaning of concept "potential energy" uses it correctly in discussion (speaking).

6. Soldier demonstrates ability to integrate new information with known information.

Examples: Soldier combines new knowledge of metric conversions with old knowledge of arithmetic to solve metric problems (problem solving, computation).

7. Soldier demonstrates ability to interpret graphic displays other than connected texts.

Examples: Reads map and orients himself (problem solving). Answers questions about population statistics on basis of bar graph (reading, computation, problem solving).

8. Given a problem described in words of appropriate difficulties, (i.e., equivalent to GT>90) soldier selects correct computation to solve problem and applies it correctly.

Examples: Soldier solves word problem (reading, problem solving, and computation).

Suggestions for Curriculum Development

To use the objectives and other materials on the preceding pages for developing curriculum, for each domain, one would analyze the task(s) or goal(s) involved in each objective or topic area. Based on this analysis, curriculum objectives would then be developed which require a soldier to demonstrate mastery of these topic areas. Mastery of any given area can of course be demonstrated in a number of ways. But all of these will involve the application of one or more of the basic skills of problem solving and learning strategies, reading, writing, speaking, listening and computation. Suggested tasks for demonstration of mastery include the application of basic skills to:

- Identify necessary or relevant information
- Find specific information through reading strategies, reference skills or use of human or community resources
- Demonstrate understanding of written or other information

  Through paraphrasing, summarizing, answering direct or inferential questions.
  Constructing alternative representation, such as flow chart, classification tables.
  Engaging in discussion or debate or evaluating others' discussions or debates.
- Demonstrate use of learning strategies by preparing for and taking closed book test.
- Demonstrate writing or speaking and problem solving by organizing grammatical and coherent essay, report or presentation.
- Demonstrate language skills and problem solving by applying general principles in area to specific real or hypothetical situations or to own life.
- Follow important procedures in area from oral or written directions or from memory.

- Demonstrate application of problem solving, language and computational skills using appropriate mathematical representations and performing appropriate computations.
- Demonstrate use of common or important forms, documents and displays in area.
- Engage in simulation or role playing of typical, important or problematic situations in area and comment on role playing of others.

Examples of some 300 curriculum objectives developed in this way in an earlier phase of this project are given in Appendix D. An experienced curriculum developer could reorganize and supplement this list to form the basis of a curriculum for an Army Developmental Education Program for Performance and Training (ADEPPT) that could offer opportunities for continuous development of basic skills for soldiers who are inept, to render them "thoroughly proficient."

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A P P E N D I X A

Report on Fort Bliss APL Project

and

BSEP I and II at Fort Dix

The Fort Bliss APL Program

As described in a DAAG-ED LOI of 25 June 1981, EXCEL is to replace both BSEP II and the off-duty high school completion program (HSCP) and is expected to provide minimum level of basic and life coping skills necessary for successful military functioning for first term enlisted soldiers through E-5, as well as to provide substantial credit toward the high school diploma required for re-enlistment. The EXCEL program by combining BSEP II and HSCP, will inherit the populations these previous programs were designed to serve and is thus directed at three populations which are at least partially distinct. These are: (1) non-high school graduates, (2) people with low ASVAB scores, GT less than 90, who are considered to be in need of basic skills upgrading, (3) people who have been referred to the program by superiors, because of deficient functioning, identified as basic skills problems.

As successor to both the previous BSEP II and HSCP programs, EXCEL can be expected to inherit the problems which have been associated with both of them, as well as having to deal with new problems arising from their combination. At the most obvious level, the HSCP is a credentialling program. Prior to 1979 the Army provided opportunity for non-high school graduate personnel to work toward their diplomas on-duty as a demonstrable facet of the service's commitment to "soldiers education and upward mobility". The program was perceived as a motivator and thus considered to support retention. In addition, since promotion to E-6 requires a high school diploma or equivalency, the HSCP by permitting soldiers otherwise ineligible for reenlistment to receive this credential, supported retention directly.

In 1979, Congress decreed that only training and educational programs with direct military relevance could be conducted during duty hours. This compelled the HSCP's to be held off-duty. Since only the most highly motivated soldiers appeared willing to devote off-duty time to study, this led to a large decrease in the number of high school diplomas granted to military personnel. (FY77: 17, 434, FY80: 3, 169). One way this situation could be revised is to alter HSCP instruction so that much of it can be shown to be militarily relevant and thus could take place during duty hours.

However, high school diplomas are granted to military personnel by the school districts where their duty bases are located, so that school districts must approve on-duty as well as off-duty programs.

For an Army HSCP with a large on-duty component to work, either the military relevance of courses required by each of these districts has to be made explicit or the individual districts have to be convinced that military-oriented instruction being offered on-duty is indeed equivalent to many of their high school graduation requirements. Either of these approaches would seem to be difficult, if not virtually impossible, if the districts impose requirements for direct equivalence to a traditional high school curriculum. One way out of this dilemma would adopt a competency based school diplomas approach where adults are granted high school credentials for demonstrating their use of literacy skills in terms of specific competencies necessary to function successfully in life situations. More and more school districts have been adopting this approach to adult high school diploma programs. Since many functioning skills and context areas involved in succeeding in the military context are directly analogous to those in the civilian world, the task of simultaneously satisfying the

necessity for military relevance and school district requirements would seem to be reduced to manageable dimensions if competency based curricula were adopted. The most prominent and widespread competency based program is the Adult Performance Level (APL) program developed at the University of Texas under the United States Office of Education sponsorship. A locally modified APL on-duty HSCP is being conducted successfully at Fort Bliss in El Paso, Texas. It is this program which has been advanced by DAAG-ED as the most promising model for EXCEL.

The problems involved in meeting the goals of the former BSEP are different in nature from those most prominent in HSCP but are no less thorny. What needs to be done here is to identify the basic skills and prerequisites needed to support successful functioning for first term enlistees and then to impart these skills so that they are retained and applied appropriately. Volumes (e.g. Reading for Working, Sticht, 1975) have been written on how enterprises of this nature should be done and there is no room here to go into the many substantive issues. It should be noted however, that the skills DAAG-ED envisions being taught in EXCEL include not only the "3 r's"; but life coping skills as well. Discussion of the nature of basic skills aside, as APL purports to be structured to provide guided practice in applying the skills of reading, writing, speaking and listening, computation, interpersonal relations and problem solving in a variety of practical situations in five knowledge-areas, it would seem appropriate to the goals and populations formerly served by BSEP II, as well as by HSCP.*

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*Although this discussion has treated the populations served by BSEP II and HSCP as if they were separate, there is no question that there is a large amoung of overlap. Non-high school graduates also tend to be deficient in basic skills.

At this point, it will be useful to describe the curriculum and mode of instruction of APL as it is offered at Fort Bliss. The APL curriculum was developed on the basis of a model which considers functional competency to be described by the following matrix of six skills crossed with five content areas:

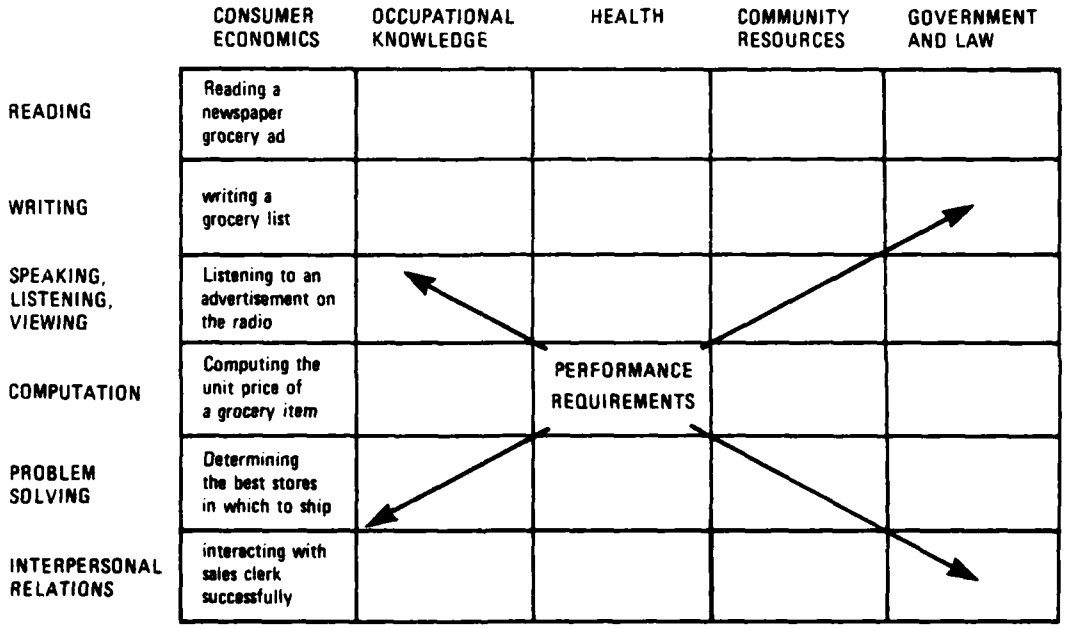


Figure A-1. **The APL Model of Functional Competency**

Content areas and skills were determined through review of literature, survey of relevant agencies, conferences of experts and interviews with under-educated adults. Within each content area varying numbers (6-18) of terminal objectives were determined to represent life demands in that area. For example, objective number 12 under community resources is "To learn the use of maps relating to travel needs." An APL curriculum is built by developing test questions, written exercises and activities representing the application of one or more of the listed skills to one of the terminal objectives. Varying degrees of local relevance can be incorporated in these items.

A student entering an APL program takes a diagnostic mastery test in each of the five areas. If mastery is not demonstrated as indicated by performance below a cut-off score (76-80% in El Paso), a student is assigned to complete written exercises, addressing each area of non-mastery. For example, one exercise under Consumer Economics involves listing reasons stores have sales. Many exercises have suggested or assigned reading accompanying them. For the math exercises in Consumer Economics this reading involves a math textbook. Most other readings appear to be topic-oriented, actual materials related to the content area. Students are required to work on the exercises until they are completed to the instructor's satisfaction. When all exercises are completed the student takes a mastery test. If the score on this test is below criterion the student is given remedial work on the specific objectives missed until a mastery test can be passed. Students completing this cycle, as well as those who passed the diagnostic test initially, proceed to perform various

"life skills activities" in the content area being worked on. An example of a life skills activity for consumer economics is:

> Use a Consumer Guide to identify a non-grocery item that you need or want to purchase and which costs more than $10. (Use the guide to determine which make and model best meets your needs.) Then compare the price of this item at three different stores, and determine from which store you would make the purchase. Discuss why.

These activities must be worked on until the instructor is satisfied.

In the El Paso program, to obtain a high school diploma, in addition to completing APL, a person must study and pass open book tests on American and Texas history and demonstrate through one of a number of means that he or she is employed or employable. Since the people in the Fort bliss on-duty program are employed by the Army, this requirement simply amounts to a certification by a superior that the person is indeed in the Army and working in an MOS. No attempt to actually assess job proficiency is involved.

The Fort Bliss APL is completely self-paced and performed independently. There is no general classroom instruction or orientation. The teacher's role is limited to offering individual help and feedback on exercise performance. There is no classroom discussion among students, since they are all apt to be working on different exercises at different times.

To investigate the suitability for EXCEL of the APL program as conducted at Fort Bliss, a site visit was made to El Paso on August 19-21. The following remarks are based on two days of extensive discussion with people involved in the APL program, both those in the Fort Bliss Education Office and those associated with the El Paso school district. In addition,

two APL sessions and a traditional BSEP II class were observed. The discussion will be organized in a question answer format, emphasizing the problems foreseen with expansion of this program into an Army-wide EXCEL system. This emphasis on problems does not mean that the program does not have many excellent features which are successfully meeting needs at Fort Bliss and which it would be desirable to incorporate into the EXCEL program.

Question 1: How is the APL program used at Fort Bliss?

Question 2: Does it serve the functions of both BSEP II and on-duty HSCP?

Educational counselors look at records of people who (a) have no high school diploma (b) have GT's below 90 and (c) have been referred or self-referred for deficiencies in performance attributed to low functional competencies. These soldiers' high school transcripts are requested and TABE or ABLE tests of basic skills are administered. People are referred to the existing programs, BSEP II or APL, in order to (1) provide them with high school diplomas or equivalency certificates, (2) raise their GT scores (3) raise their ABLE or TABE scores to 9th grade level or (4) improve their functioning on-the-job, on SQT tests, or in general, or some combination of these goals. On-duty APL is used at Fort Bliss almost exclusively to achieve the first goal, i.e. as an on-duty HSCP. In addition, there is some assumption made that goal 4 is also met to some extent and indeed off-duty APL is taken by some military voluntee and dependents to improve life coping skills.

On-duty BS or HS completion training must take place during time released by the unit commander, usually 6 to 8 weeks. Educational counselors perceive the APL course and certification program as the fastest

and most interesting way to a high school diploma for someone lacking many high school credits (Carnegie units) and having a sufficiently high level of basic skills (estimated by them about seventh grade level). Completion of the APL course counts as 18 credits toward a diploma. This, plus credits granted for military service and off-duty study of American and Texas history, is sufficient for a diploma and is seen as accomplishable within one training period. Soldiers meeting the above criteria are advised to participate in APL. Soldiers with very low GT or basic skills scores, or those with diplomas interested in improving skills or ASVAB almost always end up in BSEP II. Soldiers in BSEP II who lack only a few high school credits may elect to take one or more APL modules to complete requirements.

To summarize, APL is used at Fort Bliss almost exclusively as a way to achieve a high school diploma. Given the limited time available it is not perceived by educational staff as useful for improving basic skills as measured by TABE, ABLE or ASVAB. Nor is it considered a possible way to get a diploma for someone with low levels of these skills. Both APL and BSEP II are considered to improve functioning in real military contexts, but the arguments for this are a priority and have not been demonstrated empirically.

Question 3: Can procedures used to gain accreditation for the Fort Bliss APL as a high school diploma be used Army wide for EXCEL?

The people talked to at Fort Bliss were unanimous in their belief that the acceptance of the on-duty APL as a HSCP depended on the fact that the program originated with the school district iteself, as an alternative to traditional curricula for adults. In addition, they emphasized that the

El Paso school district is noted for being exceptionally enlightened and receptive to new ideas. The Fort Bliss educational staff has had no success in getting the on-duty APL program accepted as a route to a high school diploma in neighboring Ysleta County, whose school board is conservative and offers no alternative to the traditional high school curriculum for adults seeking a degree. The people talked to believed that the attitude of Ysleta is much more likely to be typical than that of El Paso. Indeed, the Fort Bliss staff believe that difficulty in getting local school districts to even consider accrediting a military APL program is the single greatest obstacle to success to plans for EXCEL. A significant exception to these expected difficulties, they believe, are those districts which have their own APL HS diploma programs or are receptive to their development. These are significant exceptions indeed as the programs are said to be proliferating throughout the country.

In summary, the experience with El Paso in getting the Fort Bliss APL program accredited cannot be applied to getting other school districts to accept Army APL programs for HS diplomas because El Paso originated the program and offered it to the Army. The minor modifications made in the program to make it titularly military presented no problems. In contrast, major difficulties can be anticipated in getting conservative school districts to accept such programs for HS credit. However, the substantial funds that the local bases can offer these districts should make them somewhat more receptive.

Question 4: Has the Fort Bliss HSCP been made demonstrably militarily relevant in a way that would stand up to close scrutiny were an Army-wide on-duty APL HSCP implemented?

Question 5: Is the Fort Bliss APL focussing on functioning skills directly related to military job performance and coping with everyday life in the military environment as mandated in the DAAG-ED LOI of 30 June 1981?

Based on observations of two APL classrooms in action and a thorough study of curriculum materials, it appears that only very low level modifications have been made in the El Paso curriculum to make it military. For example, the commissary is a required place for comparison shopping. At a higher level no attempt is made to capture in the curriculum the major features of military life which make it different from civilian experience. No additional military terminal objectives were developed. For example, no exercises are devoted to reading and interpreting military regulations, even though this is a very salient and difficult aspect of military functioning. In addition, many content areas include exercises which require procedures or activities appropriate for civilians and not soldiers e.g., to participate in a political campaign or to weight factor involved in selecting a doctor. It is not that such exercises are of no use to soldiers, but simply that others, more relevant to their immediate life situation, would seem more useful and certainly more clearly militarily oriented.

From the Army's point of view the most important aspect of a soldier's functioning is his or her success in performing his or her job. Indeed, the functional skills directly related to military job performance are singled out as EXCEL's primary focus by DAAG-ED. However, the APL approach by choosing to concentrate on those particular functional applications of skills which are encountered by large portions of the population, excludes coverage of use of skills to perform one's job. Thus, the occupational knowledge section of the El Paso APL curriculum contains such topics

as using employment agencies, writing resume's etc., but has nothing about using reading, mat etc. to perform actual work tasks. Thus, not only are the applications of basic skills important to functioning in the military not treated, but the general occupational support skills which are treated are civilian rather than military oriented.

Nowhere is the lack of specific military orientation of the APL program more evident than in the preparation of instructors for teaching this course. While many of the teachers have had experience with the military, e.g. are retired military or dependents, others have had none at all. No attempt is ever made to brief these latter teachers about what military life is like and how necessary coping skills and life demands may differ from those of civilian life. When asked if the skills they were teaching were those required by the student's MOS both BSEP II and APL teachers uniformly replied that they had never been briefed on what their students' MOS were, but they were sure that reading and math should be useful anywhere.

In light of the foregoing, it appears that the military elements in the Fort Bliss APL, are little more than tokenism. It appears that the program would have to be revised in light of a thorough understanding of the demands of military life and job performance before it could withstand close scrutiny as an Army-wide on-duty educational program. Mr. Wayne Aho, the newly appointed head of the Fort Bliss educational programs has voiced similar opinions. Making the program more military oriented should not only satisfy legal requirements, but ought to produce better results in increasing the ability of participants to function in the Army.

Question 6: Could the Fort Bliss APL be readily expanded to fulfill the functions currently being performed by BSEP II?

The Fort Bliss APL staff believe that the APL program is too difficult to be completed in a reasonable amount of time by people with very low levels of basic skills, say someone scoring at below the seventh grade level. In particular, reading problems, especially reading speed are conceived as holding these people back from completing APL. Thus, it might be concluded that APL is inappropriate for precisely those people for whom basic skills training is most necessary. Staff members also believe that the APL would be ineffective, or at least less efficient than direct skills training, for improving the skill levels of either low scoring personnel or those with moderate but less than ideal levels of skill. It would seem that this situation would have to be changed if an APL-like EXCEL program were charged with meeting the goals of the current BSEP II.

Once the military oriented terminal objectives and sub-objectives for EXCEL were developed, these objectives would have to be analyzed to determine their specific basic skills prerequisite competencies. These competencies, e.g. ability to arithmetically manipulate military time, could then be taught and practiced direcly in a remedial loop before they are required by the curriculum.

The current Fort Bliss BSEP curriculum consists of Math, Reading Vocabulary and English Grammar. It would seem straightforward and no less conducive to general basic skills development to teach vocabulary and math in the context of the APL materials being used (some effort is made in this direction now). English Grammar could be taught in relation to the numerous essays required in the program. (Teachers report that grammar corrections on APL essays are discouraged.) For reading, a set of materials could be developed which were relevant to the military APL, but of gradually increasing difficulty. Reading instruction utilizing these materials

could be given actual APL program. There is no reason why such instruction would not improve reading level as much as a course using general materials. In addition, familiarity with APL topics resulting from having used these materials, might be expected to ease the passage of students with lower levels of basic skills through the actual APL readings.

Question 7: How does the APL program conceive of the basic skills and their relationship to adult proficiency?

Judging by the model presented in Figure A1 APL models adult proficiency as the application of six different basic skills: reading, writing, oral communication, computation, problem solving and interpersonal relations to a number of content areas: Community Resources, Health etc. If one assumes that this tidy matrix form indicates that APL developers believe the listed basic skills to be non-overlapping and distinct with none encompassing any other, a certain amount of confusion is revealed. The nature of these five basic skills are never defined in APL literature, nor is there any explicit discussion of how proficiency in them is to be gained through performing the tasks of the APL curriculum, which presumably will transfer to performance of similar tasks in life. Because this lack of specific discussion makes thinking about an APL-like program as a basic skills enhancer difficult, we will go through the APL list of skills one by one supplying what is considered a usable definition, discussing how the skill relates to other skills, how it is treated in the El Paso APL curriculum and how it might be treated in a program which was simultaneously APL and Basic Skills education.

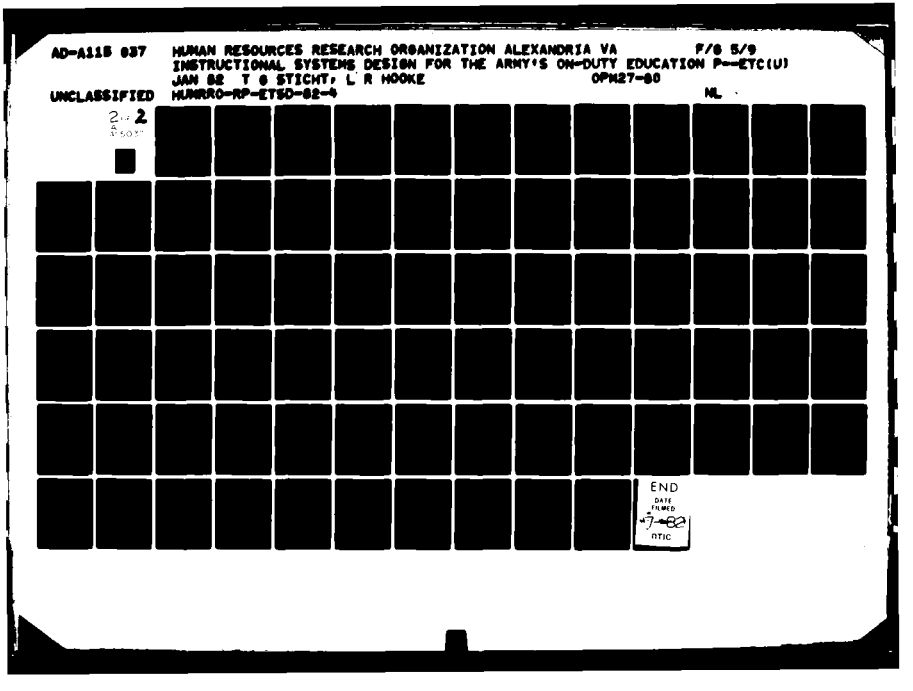
Although problem solving is not the first skill listed, we will consider it first as the most general. Problem solving may be defined as selection of a way to achieve a goal or actual achievement of that goal, when the most direct path to the goal is blocked or when there exist alternative paths. In addition to goal achievement, problem solving includes use of information to generate more information (inferencing), selection among alternatives (decision making) etc. In any given situation, successful problem solving depends on two things; knowledge of the elements involved in the problem and domain familiarity in using the skill with which these elements are combined to construct a solution. Experts differ as to whether it is feasible to teach general domain independent problem solving skills at all and under what conditions problem solving strategies acquired in one situation are most likely to transfer to another. However, one of the most promising lines of investigation in this area has amassed considerable evidence that acquisition of general problem solving skills and transfer of skills from one domain to another is facilitated by conscious knowledge of one's own cognitive process during solutions (metacognition).

The issue of transfer of problem solving skills from one domain or problem to another is of particular importance in APL, since, presumably, one is interested not in whether learners can perform the "life coping" exercises themselves, but whether they will be able to cope with actual life problems of analogous type, but which differ in many particulars. In this regard, it can be argued that such transfer can only take place if a solver has recognized that there is similarity between a problem that has already been solved and one which he is facing. It is not clear that all people can recognize such similarities unprompted. Again such recognition

involves conscious awareness of ones own problem solving processes and the situation features which trigger them. The APL curriculum in general deserves high marks for supplying the first prerequisite for successful problem solving domain knowledge. A large proportion of APL reading contains just such information about the content domains. However, insofar as the particulars of the life coping demands of an enlisted person differ from those of the civilian world, the Fort Bliss program may be imparting familiarity with an inappropriate problem solving domain.

As for the second prerequisite of successful problem solving, appropriate problem solving skills, the APL curriculum makes no direct attempt to teach these at all. If any improvement is to be made in such skills through the course, this would have to be accomplished through generalization from practice in solving the problems assigned. However, the weight of the evidence from problem solving research indicates that people, particularly those with limited skills, cannot be counted on to make such generalizations by themselves.

A program could be envisioned where the processes involved in successful problem solving in a variety of domains were discussed explicitly, with emphasis on awareness of ones own cognitive processes during solution and on recognition of features of problems which make one or another process apopropriate. Such instruction would not guarantee successful problem solving in real life. However, a person who has been explicitly taught to recognize that the processes involved, for example, in the APL exercise of listing factors relevant to choosing a doctor are very similar to those used in an exercise about an apartment, might well be expected to do more transfer when faced with a real-life task of choosing something.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It will be claimed below that the classification of real-world tasks as involving problem solving or reading, math etc. is inaccurate, since all the other APL skills are themselves species of problem solving. It should be noted in addition here that while it is possible to solve real world problems without calling on knowledge of interpersonal relations, math etc., there are very few real world problems and certainly none in APL, that can be understood and solved without recourse to languaging skills (reading, speaking etc).

The APL skill of interpersonal relations can be considered a form of problem solving which requires knowledge and manipulation of human desire, motivations etc. Although interpersonal relations are considered a skill according to the APL matrix, the closest they come to being taught is as part of the Health and Occupational content areas. However, no explicit instruction appears to be given in using such skills in the service of life coping. Many of the APL life skills exercises require some degree of interpersonal skill, e.g., calling a funeral home, or having a simulated job interview. However, it is not clear whether any feedback is provided to the student as to why he is exercising these skills. The nature of whatever feedback is provided would appear to be at the discretion of the individual teacher. In the Fort Bliss APL program, students are given no opportunity to demonstrate, practice and improve interpersonal skills by interacting in classroom discussions, critiquing each other's presentations etc. Interactions like this might prove very useful for the program to teach appropriate use of these skills. Such discussions have previously proved to be valuable components of military basic skills programs (FLIT, JORP). Their absence seems to be a serious flaw in the APL program. However, this may be unavoidable if the program is to be individualized and self paced.

Mathematics is a body of knowledge, a set of linguistic symbols for representing meanings relevant to quantities, the relationships among them and operations for manipulating them. Since mathematic symbols are linguistic entities, almost all mathematics is languaging as well. Mathematics of course, is also problem solving par excellence. In much real world mathematics or computation, a person must use problem solving skills for going from a situation involving quantities or a description of such a situation in words to appropriate mathematic representation and sequence of operations for finding an answer. It may be this aspect of math rather than lack of knowledge (e.g. of multiplication tables) per se which make real world math difficult for so many people.

In contrast to some other skills, mathematics appears to be explicitly taught in APL, especially as it is relevant to consumer economics. It would perhaps be beneficial to provide explicit instruction and practice in going from a variety of real world situations involving quantities to appropriate application of math operations. A mastery of similar problems in a wide variety of domains might be more likely to produce appropriate performance in new settings in real life. In addition, it might be useful to include instruction in applying heuristics to real-life quantitative situation to produce approximate estimates of an answer. Research (Lave, 1980) has shown that many people function successfully on a pragmatic level by dealing with quantities through estimation, without resorting to exact computation.

In addition, there is a need for APL to provide instruction and practice in the mathematics skills involved in jobs, not just the necessary mathematical operations, but the selection of appropriate operations to meet a real world situation followed by the performance of those

operations. Since the computational tasks involved in different types of jobs, e.g., in supply vs. vehicle maintenance fields, are likely to differ sharply, and it is more important for a person to have thorough mastery of the computational demands of his or her own job than a broad but shallow mastery of those in a variety of jobs, perhaps, it would be best to create several alternate clusters of occupational math instruction.

The languaging skills: reading and writing, on one hand, and, speaking and listening, on the other, have been left for last. In our view, these skills are best regarded as accessing in two modalities a single body of knowledge, knowledge of language. Speaking and listening involve the use of special patterns of sound to represent linguistic meaning; reading and writing represent the sounds and thus their linguistic meaning graphically. Once a person has mastered the decoding of print, and a large majority of even BSEP II students will have done so to a large degree, reading and listening abilities are highly predictive of each other and knowledge gained through one modality can be accessed through the other. One implication of this is that many people in basic skills programs ostensibly for reading problems can be expected to show deficiencies in oral languaging as well. Another quite different implication is that instruction in vocabulary, content areas etc. gained through one modality ought to transfer to the other. For this reason, it is particularly useful to distinguish the skills of oral and written language communication in content domain instruction in APL.

In response to question 6, a possible way to incorporate remedial training in basic language skills into an APL program was outlined. What kind of incidental training in basic skills is being offered in this program, for people who are not in need of preliminary remediation (i.e., those reading above 7th RGL according to Fort Bliss staff) and how might

this be improved? To answer these questions, one has to consider the nature of the components of reading (or speaking, listening or writing).

The first component of the language skills and one that is stressed in virtually every test of language performance is vocabulary knowledge. Although high knowledge of vocabulary in one area is usually associated with knowledge or vocabulary in another (if the areas are not very specialized), being taught certain words does not ransfer to knowing others. This suggests, that in order to make certain that a person has the requiste vocabulary for reading (listening etc) comprehension in a content domain, one has to make sure the person knows the exact vocabulary involved. No amount of general reading training will do the trick, if the particular words are not covered. The Fort Bliss APL program shows awareness of this and includes vocabulary exercise for every domain. However, if the purpose of the EXCEL program is to assure people have sufficient language skills for success in their military careers, it would be necessary to make sure, by some combination of testing and teaching, that students know the vocabulary involved in military life and their own MOSs.

The other component often assigned to reading (and by implication, listening) by educators is comprehension units of language larger than words. In comprehension, a person combines knowledge of word meanings, knowledge of grammatical rules, knowledge of the subject under discussion etc. to construct the meaning of a phrase, sentence, speech, paragraph, chapter etc. Psycholinguists and others interested in the nature of language understanding and production are beginning to realize more and more that even very simple acts of (oral or written) language understanding involve sophisticated problem solving as people "deduce" the identify of an incompletely heard sound, determine pronoun reference, choose among

alternative interpretations etc. Writing and speaking, to be effective clearly also require interpersonal problem solving for idea generation, word selection, organization, adherence to grammar etc. Writing and speaking, to be effective clearly also require interpersonal problem solving as one selects the language tone to fit the situation, attempts to be persuasive etc. In the real world even reading and listening involve knowledge of interpersonal relations, since a person must combine linguistic knowledge with what he or she knows about people's motivations etc. to figure out the "real" meaning of a communication and its originator's intention.

Whatever is known or not known about teaching problem solving in general applies to the problem solving activity of language comprehension and generation. The best bet for inducing transfer is probably problem solving practice and instruction in as many different domains as possible, but this is chancey. Metacognitive training, i.e., explicit instruction and awareness of the processes involved, may help if it is done properly, which is difficult to define.

We might expect with more certainty that a good way to insure successful problem solving in a domain is to facilitate the development of expertise in that domain or at least provide familiarity. This last principle, which is the most reliable, leads to a recommendation to provide reading and other languaging instruction and practice in the specific domains or content areas chosen for coverage; the Fort Bliss APL, appears to be doing this in spite of the fact that assigned reading is not considered to be "basic skills training" but "subject matter" learning. Were the APL program to be altered to make it focus on military lives and military jobs, our recommendation would be to have language training use as much as possible actual job and military situations, tasks and materials.

Real world applications of languaging skills may require the performance of information processing tasks more well-defined than "comprehension", Sticht, (1975) and Mikulecky and Diehl, (1980) investigating real-world and on-the-job literacy tasks in military and civilian contexts respectively, have found remarkably stable differences between real-world literacy tasks and the ones encountered in school and many competency based training programs. These differences include the fact that most schoolroom tasks involve reading-to-learn while real-world tasks are typically reading-to-do. The latter tasks make fewer demands on memory, not necessarily requiring a well-integrated memory representation, but instead may emphasize such skills as information location. Data suggest (Sticht, 1975) that on-the-job and other reading-to-do tasks are easier for people with limited languaging skills than typical reading comprehension tasks. However, efficient procedures for performing these tasks may not be induced by such people unless they are explicitly taught and practiced. Hence, such instruction would seem to be desirable in an EXCEL program, with the exact tasks to be included determined by consideration of the competencies and military life skills to be achieved.

The Fort Bliss APL program deserves high marks for inclusion of real-world reading-to-do tasks, (e.g. filling out income tax forms) as well as speaking, listening and math tasks which are similar to those encountered on the job and in other life coping situations. The above cited research has indicated that most of the literacy tasks encountered in real world situations take place in "information rich environments" where readers have other contextual sources of information to supplement what they read or hear, including recourse to asking a questions. The APL, by requiring only that exercises be performed correctly and not that the

student use only certain material in his memory as information sources, rightly reflects this situation.

The improvements which might be made in the Fort Bliss APL in regard to its treatment of reading and other literacy tasks for the purposes of EXCEL are similar to those suggested in other areas. If the program is to perform the functions of basic skills improvement as well as life coping skills demonstration, some provision might be made for explicitly teaching performance of components of real-life literacy tasks, e.g. use of an index. Also, reading tasks included should be geared to a military context and, most important, they should include those necessary in military jobs, e.g., following of procedural directions.

Description of Fort Dix BSEP

Since 1979 BSEP I has been offered at Fort Dix to soldiers studying at each of the three on-post AIT schools: cooks, motor transport and mechanics. While BSEP I instructors are from a local community college and not Army personnel, in all other ways BSEP I appears fully integrated with AIT job training.

The BSEP I program at Fort Dix uses a so-called "remedial loop" approach. What this means is that students who are identified as having difficulty in AIT with particular AIT modules involving skills applications are referred to BSEP I where they are taught those specific skill applications. The success of this approach is facilitated by the fact that each BSEP instructor is involved with only one training school and thus one MOS and works closely with the AIT training instructor. This in turn is facilitated by the fact that each BSEP classroom is located in the appropriate training school.

Although lists of soldiers eligible for BSEP on the basis of low GT and SelectAble scores are available to both BSEP and AIT instructors, the major means of referral of people to BSEP I involves identifying those who are having difficulty with the current AIT module which is attributed by BSEP or AIT instructors to reading or math problems. This identification is accomplished either through AIT or BSEP instructor observation of classroom performance (BSEP instructors frequently are present in AIT classes) or because soldiers fail module tests or pre-tests. In the cooks school a job-related reading pre-test is also used to identify BSEP I students.

The BSEP referral procedure described means that students with operational problems may participate in BSEP even if they are not eligible on the basis of their GT or other general skills test scores. In addition, it is possible (although not likely) that a soldier with low GT or other scores may not have problems in AIT and thus not be referred to BSEP I. In practice, although no overall statistics were available, it appears that at least in some schools most students participate in some BSEP I activity during their AIT training. For example, in the Motor Transport School in October 1981, of 304 AIT graduates 229 (75%) had been in BSEP I at least once. Expectably, students referred to BSEP I during one AIT module, were likely to be referred during another module. Again using figures for the motor transport school for October 1981, 523 different students participated in BSEP I 1265 times, giving an average participation rate of 2.4 times per student.

BSEP I instruction is oriented toward teaching students to perform the particular job tasks with skills components which were causing the difficulty in AIT. To this end, actual job materials, e.g., forms, cooking measurement conversion tables, are the primary materials used. Not only do BSEP I instructors frequently set in on AIT classes, but AIT trainees are also frequently present in BSEP I as auxiliary instructor and teacher advisor. This helps to ensure that the tasks taught in BSEP I are indeed those currently required in the appropriate AIT module and that BSEP I instruction is responsive to the specific problems soldiers are having in AIT. Because of the nature of this approach, the content of BSEP I instruction does not differ as sharply from job training as is the case with traditional skills courses. Indeed, this BSEP I instruction can correctly be described as extra help with AIT tasks involving basic skills

applications, as in the MOS Career Performance domain of the ADEPPT (Chapter 3).

In theory BSEP I instruction addresses all the basic skills identified by the Army. In practice, however, teachers conceive their tasks as teaching mainly reading and arithmetic, with writing being essentially limited to filling out forms. The type of reading task addressed and particularly the amount and time of arithmetic taught depends greatly on the MOS and training module involved.

Depending on the perceived nature and universality of student difficulty, BSEP I instruction may vary from general class lectures (e.g., on reading of tables for cooks school) to completely individualized tutorial help. Although no statistics were available it was reported that this BSEP I program has virtually eliminated AIT attrition and that commanders are pleased with it.

BSEP II

There are two BSEP II programs at Fort Dix, the first targetted at improvement of general levels of basic skills and ASVAB scores and the second at SQT improvement. Both are for the permanent cadre at Fort Dix. These two programs will be discussed in turn.

The general BSEP II program accepts soldiers with a wide level of basic skills. Some have very low GT scores, while others have scores just barely below the level needed for technical school or even officer's training. BSEP II instructors report a TABE score range of 3.0 RGL to 10th RGL with the majority scoring at 7 or 8. Some students are command referrals but most are volunteers. Most soldiers in the program are reported to be E-2's and E-3's. Classes meet from 12 to 15 hours per week for 12 weeks.

Although this BSEP II class appears to be taking a general approach to basic skills improvement, it is also very specifically targetted at GT test scores. This became clear through discussion with teachers (instructors associated with a local college) and was also demonstrated by the fact that after the recent change in the ASVAB to include an additional test (paragraph comprehension) BSEP II student improvement on the GT, which had been an impressive 23-25 points, decreased dramatically.

Consonant with the targetting of this course at the old GT (which consisted of vocabulary and arithmetic word problems), this BSEP II emphasized mathematics and vocabulary (6th to 10th grade level) taught through lectures. The reading element involved in arithmetic word problems is also emphasized in recognition of the fact that computational skill is not sufficient for solving these problems. In addition to lectures, frequent practice is provided in the taking of speeded vocabulary and arithmetic tests. This serves three purposes: assessment of student progress, reinforcement of material taught, and development of test taking skills necessary for good GT performance. Retake of the GT is a formal requirement at the end of the course.

In addition to the math and vocabulary lectures, students in BSEP II do individual work on reading comprehension using commercial SRA materials. That this is not strikingly successful may be indicated by students' apparent lack of improvement on the new paragraphs comprehension subtest of the ASVAB.

No formal evaluation of this program has been performed. The current instructors report that until the implementation of the new test (ASVAB) students were improving 23-25 points on the GT.

The SQT BSEP II course was developed in response to a survey directed by a commanding officer concerned about SQT failures. This survey identified the following problems:

1. Some soldiers had inadequate reading comprehension skills.
2. Some soldiers were unable to use their SQT notices, soldiers manuals and other specific reading materials needed to prepare themselves for the test.
3. Time was not available on duty for studying.
4. Some soldiers could not or did not assemble all the relevant materials referred to in the SQT notice.
5. Many soldiers did not have good study skills.

The BSEP II course developed to address these problems is now mandatory at Fort Dix for all soldiers who have failed their previous SQT test and is also open to volunteers. Participants are reported to range in RGL from 4th to 13th grade as measured by the TABE. The class is timed to be of maximum benefit for the next SQT.

The problem of lack of on-duty study time is directly addressed by this course, by providing more than 50 hours of classtime on-duty (over a period of 4 weeks) to be devoted to SQT preparation. The problem of lack of all the necessary materials has been solved by having the instructor identify and collect all the materials needed by each soldier in the class, which are made available in a room adjacent to the classroom.

The use of all the Army materials necessary for proper SQT preparation, particularly the use of the notice in conjunction with the soldiers manual, are taught as specific skills applications. Where the content of the SM's are presenting difficulty these problems are addressed individually. This is especially true in those MOS's (e.g., artillery) requiring

specific calculations.

To improve "general" reading skills, commercial reading comprehension, and vocabulary building materials are used. Outlining as a study skill is introduced. By the end of each class, each soldier must make an outline of his or her Soldier's Manual in question and answer format. This not only insures that the soldier will have read his manual at least once, but that he will be forced to consider the meaning of what he reads and possible SQT questions. as well as having applied a frequently effective study strategy to it.

Again no formal program evaluation statistics are available but it is reported that no soldier in the program has filed to pass his or her next SQT.

APPENDIX B

USAREUR Life Coping Skills

USAREUR Life Coping Skills

Appendix B lists the Life Coping demands identified by HumRRO researchers (HumRRO, the US Army in Europe, 1981) as being those faced by first time enlisted personnel in Europe. As a first step in identifying these demands HumRRO held a conference for representatives of agencies and organizations which interact and/or provide services to first term enlistees. A preliminary list of life role demands was synthesized for the results of small group discussions.

After revision the list was incorporated in a survey instrument which asked respondents to rate how frequently each demand was faced by first term enlistees and how important it was that it be met. Respondents were agencies offering services to first time enlistees, first time enlistees themselves and non-commissioned officers supervising them. Results of the survey allowed HumRRO to identify 39 demands which were rated as important and frequent by all three groups of respondents. These demands are marked with an x in column 5 of the pages in Appendix B.

In deriving the curriculum objectives listed in Appendix A, we used the USAREUR list in combination with other sources, as a starting point for suggesting the life demands made on soldiers. Since the USAREUR list was not organized into broader topics, considerable effort was expended sorting demands into content areas and then clustering them so that more than one specific USAREUR demand might be incorporated into a single objective and these demands combined with those identified by other means. In addition, since the USAREUR demands were phrased in terms of real life behaviors, we had to transform them into behaviors observable in the classroom to indicate whether students possess the skills and/or attitudes necessary to perform the real world behavior.

Finally, when our preliminary list was completed, we checked to make sure that all important USAREUR demands were addressed by one or more of our objectives.

A list of military life coping skills identified by TRADOC was used in a similar way.

Demand #	Demand	Major Content Focus[1]		LCS in USAREUR Priority[4]	USAREUR Specific Focus[5]
		APL[2]	LCS in USAREUR[3]		
1	Prepare a family budget.	CE	C		
2	Prepare a personal budget.	CE	C		
3	Follow safety procedures for the home.	H	H		
4	Select educational program(s) based upon availability, eligibility and personal abilities, interests, and needs.	CR	E		
5	Utilize public transportation system	CR	C	X	X
6	Perform job tasks adequately.	OK	W	X	
7	Register to vote and request absentee ballot.	G/L	L		
8	Save money.	CE	C		
9	Observe host nation traffic rules.	G/L	L	X	X
10	Utilize the services offered through the Educational Services Office.	CR	E		
11	Compare and select appropriate forms of transportation depending on situational needs.	CR	C		
12	Pass SQT/perform SQT tasks.	OK	W	X	
13	Know how to obtain emergency financial relief.	CE	C		

[1]Many life role demands are related to two or more content areas. The major focus of the demands is indicated.

[2]APL content areas: CR = Community Resources; OK = Occupational Knowledge; CE = Consumer Economics; H = Health; G/L = Government and Law.

[3]LCS in USAREUR content areas: W = Work; C = Consumer/Financial; H = Health; L = Legal/Citizenship; R = Recreation/Leisure; E = Education.

[4]Priorities are based on perceived importance of the demands on the percentage of first-term enlistees who frequently face the demands.

[5]In order to meet the majority of the demands within USAREUR, some modification of or addition to the skills required to meet them in CONUS will be required. This column indicated those demands which go beyond this requirement and are USAREUR specific.

Demand #	Demand	Major Content Focus: APL	Major Content Focus: LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
14	Obtain USAREUR driver's license.	G/L	L		X
15	Take safety precautions specific to the host nation environment (i.e., avoiding possibly rabid animals, handling transformers safely; getting on and off trains and strassenbahns safely).	H	H	X	X
16	Utilize sponsor program effectively.	CR	W		X
17	Apply for credit.	CE	C		
18	Become familiar with community resources of instruction for a new leisure skill.	CR	R		
19	Handle classified material correctly.	OK	W		
20	Transfer property legally.	G/L	L		
21	Determine when a physical or psychological problem requires medical treatment.	H	H		
22	Recognize the importance of tests and their effects and therefore give best effort on tests.	OK	E		
23	Use DPP effectively.	CE	C		X
24	Be aware of provisions/contracts of economy rental contracts.	CE	C	X	
25	Communicate effectively with host nation military personnel.	OK	W		X
26	Utilize best available currency exchange rates.	CE	C	X	X
27	Observe acceptable/preferred behaviors within the host nation; such as, quiet hours, "unwritten" rules of behavior, social behaviors.	CR	L	X	X
28	Apply proper first aid to a person suffering from drug overdose.	H	H		
29	Acquire travelers checks.	CE	C		
30	Clarify educational goals.	CR	E		

Demand #	Demand	Major Content Focus APL	Major Content Focus LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
31	Observe security regulations (telephone, SMLM).	OK	W	X	
32	Know when, how, and for what purposes to obtain power of attorney.	G/L	L		
33	Find appropriate housing.	CE	C		
34	Communicate effectively with store personnel when shopping on the economy.	CE	C	X	X
35	Acquire different physical and psychological health services, both military and local national.	H	H		
36	Use banking facilities for deposit/withdrawal.	CE	C	X	
37	Utilize effective study skills, including locating a place conducive to study.	CR	E		
38	Interface effectively with NATO partnership unit.	OK	W		X
39	Maintain balanced checking account.	CE	C		
40	Recognize when personal rights are violated or infringed upon and know appropriate recourse.	G/L	L	X	
41	Organize personal time in order to schedule travel/recreational pursuits without conflicting with field duty requirements, alerts, shifts, etc.	CR	R	X	X
42	Adjust to overcrowded housing conditions.	H	H		
43	Pay bills on time.	CE	C	X	
44	Maintain POV in safe operating condition.	CE	C		
45	Retain, apply and transfer knowledge and skills which have been learned.	OK	E	X	
46	Follow military dress code.	OK	W	X	
47	Understand legal consequences of contractual agreements.	G/L	L		

Demand #	Demand	Major Content Focus APL	Major Content Focus LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
48	Participate in unit sponsored recreational activities.	CR	R		
49	Acquire necessary immunizations for self and family.	H	H		
50	Schedule time to take classes while also meeting on duty and off duty obligations.	CR	E		
51	Recognize uniforms/rank of NATO personnel.	OK	W		X
52	Observe military and host nation rules and regulations concerning the ownership and care of pets.	G/L	L		X
53	Gather information about available options and select recreational pursuits appropriate to one's interest, budget, marital status.	CR	R		
54	Use acceptable social skills with members of the opposite sex.	H	R	X	
55	Follow parking regulations.	G/L	L		
56	Participate in and meet the requirements of the Headstart Host Nation Program.	CR	E		X
57	Utilize chain of command.	OK	W	X	
58	Understand rules and regulations governing marriage/divorce to include cross-national relationships.	G/L	L		
59	Know how to plan a trip utilizing maps, schedules and tour or travel agencies.	CR	R		
60	Apply basic rules of physical hygiene, preventive medicine.	H	H	X	
61	Choose/buy a car and register it.	CE	H	X	
62	Locate materials/resources which assist one to learn (e.g., library, learning resource center, resource people).	CR	E	X	
63	Exhibit military bearing.	OK	W	X	

Demand #	Demand	Major Content Focus APL	Major Content Focus LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
64	Respond appropriately to instances of discrimination by host nation citizens.	G/L	L		X
65	Develop tolerance/respect for the language, values and behaviors of host nation citizens.	H	H	X	X
66	Prevent or obtain treatment for veneral diseases.	H	H		
67	Obey military and German police.	G/L	L	X	X
68	Locate sources of accurate information about educational opportunities, services, and benefits.	CR	E	X	
69	Communicate effectively with superiors.	OK	W	X	
70	Observe military and host nation laws.	G/L	L	X	X
71	Recognize the use of recreational activities for self-realization, enhancing personal growth.	H	R	X	
72	Maintain proper weight and level of physical fitness.	H	H	X	
73	Keep records for income tax filing.	G/L	L		
74	Determine and utilize educational financial benefits consistent with eligibility and personal needs (e.g., VA, VEAP, TA, BEOG, and loans).	CR	E		
75	Obtain "career" information.	OK	W		
76	Know individual rights within Army assignment system.	G/L	L	X	
77	Persevere in attempts to communicate effectively with local nationals despite language barrier.	CR	C	X	X
78	File income tax report correctly and on time.	G/L	G	X	
79	Acclimate to an adult learning situation which differs from the traditional secondary school.	CR	E		

Demand #	Demand	Major Content Focus APL	Major Content Focus LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
80	Complete requirements for promotion.	OK	W	X	
81	Share information concerning community resources with spouse/family.	CR	R		
82	Make a smooth cultural transition from CONUS to USAREUR.	H	H		X
83	Choose and acquire car insurance policy.	CE	C		
84	Take advantage of alternate, non-traditional educational programs (e.g., correspondence, external degrees, CLEP, and independent learning).	CR	E		
85	Respond appropriately to rental advertisements.	CE	C		
86	Make the best use of educational opportunities given the realities imposed by mission priorities and/or limited opportunities in isolated sites.	CR	E		
87	Know and observe relevant passport, visas, and customs regulations, to include travel to Eastern bloc countries.	G/L	L		X
88	Establish and maintain effective work relationships with peers.	OK	W	X	
89	Utilize information about current cultural and sport events.	CR	R		
90	Use housing referral services.	CE	C		
91	Pay host nation utility bills on time.	CE	C		
92	Deal effectively with one's own emotional needs and problems.	H	H		
93	Deal appropriately with sexual harrassment.	G/L	L		
94	Effectively utilize individual and unit training opportunities.	OK	W	X	
95	Use postal services effectively.	CE	C	X	

Demand #	Demand	Major Content Focus APL	Major Content Focus LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
96	Observe military family housing rules and regulations.	G/L	L		
97	Use military shopping facilities.	CE	C	X	
98	Conserve energy at home/work and on the road.	CE	C	X	
99	Observe military barracks rules and regulations.	G/L	L	X	
100	Use ration cards.	CE	C	X	
101	Observe anti-shoplifting laws.	G/L	L	X	
102	Obtain added value tax relief.	CE	C		X
103	Overcome negative attitudes of peers, supervisors and self toward education.	H	E		
104	Recognize the information services available from your local library.	CR	E		
105	Locate and utilize resources for independent training (MOS libraries, correspondence courses, learning resource centers).	OK	W		
106	Use comparative shopping methods.	CE	C		
107	Recognize authorized/non-authorized solicitors.	CE	C		
108	Know what assistance is available through JAG legal services.	CR	L		
109	Know of educational opportunities for dependents.	CR	E		
110	Understand how to deal effectively with personal and family crises.	H	H	X	
111	Use customer complains procedures correctly.	CE	C		
112	Know how to contact local chaplain's office to obtain information about services and programs.	CR	H		

Demand #	Demand	Major Content Focus APL	Major Content Focus LCS in USAREUR	LCS in USAREUR Priority	USAREUR Specific Focus
113	Purchase gas coupons.	CE	C		X
114	Know how to order and pay for food and behave appropriately in restaurants on the economy.	CE	C	X	X
115	Develop and utilize knowledge of geography estimates of time and distance for travel.	CR	R		
116	Recognize role of education in promotion/ advancement.	OK	W	X	
117	Apply learning skills such as information gathering, problem solving, and the organization, analyses and evaluation of data.	OK	E		
118	Utilize variety of economy markets, bazaars, sales, etc.	CE	C		X
119	Make choices about drug/alcohol use based on legal/health consequences.	H	H		
120	Avoid businesses known for deceptive practices.	CE	C		
121	Relate individual job to Army mission.	OK	W	X	
122	Obtain sales agreement in writing.	CE	C		
123	Provide proper family and child care.	H	H		
124	Understand the purposes and methods of family planning and its physical, psychological, legal, and religious aspects.	H	H		
125	Apply first aid procedures in response to accidents and emergencies.	H	H		
126	Understand impact of current events on soldier in Europe.	OK	W	X	X
127	Apply European measurements (clothing, weight, metric).	CE	C		X

A P P E N D I X C

General Discussion of the ADEPPT Components of Table 3, Chapter 3

APPENDIX C

General Discussion of the ADEPPT Components of Chapter 3, Table 3

This appendix presents a general discussion of the ADEPPT components summarized in Chapter 3, Table 3. It discusses the rationale behind the entries for the ADEP I, II, and ASEP continuum of basic skills education. This discussion is presented as background to the discussion of ADEPPT in Chapter 3. It presents an insight into the process of arriving at the ADEPPT of Chapter 3, though the latter does not include all that is discussed in the Appendix.

ADEP I Initial Entry Training

Basic Training

The first phase of a soldier's career is basic training (BT). In BT the soldier is introduced to a large number of topics and concepts specific to the military and possibly quite different from his previous life experience. These topics we consider part of the Military Environmental Support Domain, since they are a basis for all military performance and not specific to a single MOS (although they are directly relevant to the MOSs of combat arms soldiers). A list of the topics covered in basic training appears in Table C-1.

A large amount of the teaching and virtually all of the testing in BT, is performance oriented. However, much of the performance is described and explained through spoken language. Although specific military terms are explained, a reasonable amount of vocabulary knowledge is called for to understand these explanations. Because of these demands on listening

vocabulary and understanding skills, non-native speakers of English are given an oral language understanding test, the English Comprehension Test (ECT). Those receiving scores below a cutoff are sent to an English training program prior to or during BT. Although native speakers of English are not so tested, the possibility exists that some might not have the necessary vocabulary or oral understanding skills for adequate BT performance. Although this may be unlikely under today's standards, the necessity for lowering standards might occur under certain conditions and, perhaps, should be taken into account here. Such soldiers could either be identified directly through the ECT or predicted on the basis of very low ASVAB GT scores.

Some soldiers with adequate vocabulary might encounter problems with learning through listening, particularly in a stressful situation like BT. Early learning strategy training might forestall other future problems. Since learning verbal material is so important to school performance, school drop-outs may be particularly likely to have trouble here.

Reading material in BT appears largely limited to the SMART book which reinforces what is learned in lectures. Soldiers are also required to learn the phonetic alphabet and translate written messages into it. This might produce difficulty in some soldiers with low reading levels. Soldiers also must learn the interpretation of maps; this involves not only a new type of reading skill, but possibly new computational requirements.

Although BT requires little independent problem solving for soldiers, many of the topics first introduced here can form the basis of an understanding of military life which will enable future problem solving in this domain. Thus, the attainment of understanding here may have future consequences.

AIT or OSUT

After BT a soldier goes to job training, either AIT or OSUT. Unlike BT,

TABLE C-1

Topics Covered in Basic Training (From U.S. Army POI 21-114, Program of instruction for U.S. Army Basic Training).

First Aid
Nuclear, Biological, and Chemical Defense
Individual Tactical Training
Marches and Bivouac
Physical Readiness Training
Guard Duty
Role of the Army
Responsibilities of the Soldier
Identification, Preparation, and Wear of Uniforms
Inspections
Drill and Ceremonies
Military Health and Hygiene
Basic Military Communications
Military Justice
Map Reading/Terrain Association
Code of Conduct
Opposing Forces Orientation
Law of Land Warfare/SAIEDA Orientation
Conditioning Obstacle Course
Confidence Obstacle Course
Survival, Escape, Resistance, and Evasion
Personal Affairs
Alcohol and Drug Abuse Prevention and Control
Rape Prevention
Equal Opportunity

job training differs for each MOS. We assign this course not only to the domain of MOS performance, but to Direct Career Support, since skills requirements of job training, particularly with regard to learning by listening and reading, may differ from those of job performance. For purposes of remediation, reading demands of initial job training have traditionally been emphasized by the Army and others. Reading tasks of Skill Level 1 Army jobs (e.g., following procedural directions, looking up facts) have been found to be considerably less difficult than many school reading tasks, because they do not make great demands on understanding ideas or on memory. However, many of these tasks, materials and vocabulary unfamiliar to new soldiers, may require special direct instruction for those with lower verbal skills. Vocabulary learned will, of course, help writing, listening and speaking performance as well as reading.

What seems to be poor reading skills in AIT may result from lack of knowledge of job-specific vocabulary and concepts. When some soldiers require more practice with these than others, this practice may be provided by IET ADEP. Because of the intensive and specific nature of AIT, it is more important in ADEP I to concentrate on MOS (and military) specific terms and concepts than on general ones, even though learning general knowledge is more likely to lead to general skills test improvement. It should be noted here that a general basic skills test like the TABE or ASVAB are not appropriate tools for measuring student progression in courses designed to teach job-specific tasks or material.

Although job reading tasks may not require high levels of understanding or memory, learning of relevant reading material in training may demand learning strategies for listening as well as reading. Understanding of what is read or heard will additionally form the basis for future independent

performance and problem solving. Thus, development of learning and verbal comprehension strategies might take place in ADEP 1 although this should be secondary to direct teaching of specific skills and tasks. Such strategy training would be most beneficial as applied to job-specific tasks and materials. Training programs such as these have been developed for the Army.

Computation tasks and skills have been found to vary considerably for skill level 1 jobs. Jobs with lower skilled trainees (e.g., food service) are likely to be limited to a few specific and directly teachable computational tasks. Although direct prerequisites for these (e.g., addition facts) must be taught, ADEP I may not be an appropriate place for upgrading general (academic) math skills.

Soldiers likely to need ADEP I may be identified by score on a general test of basic skills, since such tests are good predictors of success with specific skills applications. Although the Army directs placement on the basis of the SELECTABLE and TABE tests, the ASVAB GT and AFQT composites contain tests of vocabulary, reading comprehension and math and are equally suitable. Even more important is that students having difficulty be referred to ADEP I by AIT instructors. BT instructors should also be asked to recommend students for future help. The MOS specificity of skills requirements in AIT and the need to target help at specific problems suggests close integration of AIT or OSUT and ADEP I.

ADEP II

This section discusses the seven requirements of ADEP II given in Chapter 3, Table 3 as being taught at the Unit.

OJT and Job Performance

After AIT or OSUT, a soldier is sent to his permanent duty station and begins to perform his job, initially undergoing OJT of varying length and

content depending on the MOS. His or her job performance is the Army's central concern.

During OJT and job performance at skill levels 1 and 2, every soldier will undoubtedly be called on to perform new tasks in his MOS requiring basic skills and involving new vocabulary, materials, facts, concepts, etc., which were not introduced or not mastered during AIT. Some soldiers will have trouble performing these tasks because they are unfamiliar, require unmastered prerequisites (e.g., vocabulary, computation) or because they are more demanding of skill proficiency. The ADEP II program which will be charged with providing skills support for this part of a soldier's career would have as a prime task ensuring that soldiers having such difficulty were helped to perform these skill uses. This suggests an approach similar to the one outlined for ADEP I.

One major difference between ADEP I and ADEP II courses is that students from many different MOSs may be in a single ADEP II class. If some skills training is to be targeted at specific job tasks, special provisions must be made for the instructor to find out what these tasks are. For example, students themselves can be required to bring in materials and describe jobs as an exercise.

Although as soldiers' careers progress, they may listen to fewer lectures like those in AIT, they will be expected to learn about their job environment, etc., from experience. They will more and more be required to act as independent job performers or problem solvers, selecting a course of action on the basis of complex factors. In a given job, soldiers may need to decide when more information must be obtained and seek it. They may be asked to interpret a complex body of language (e.g., a regulation) and even explain it to someone else. All these problem-solving behavior indicators of increased job

responsibility depend for success on what may be called understanding of the job domain. Such understanding must involve not only particular performance, but ability to handle, produce or understand integrated verbal descriptions of job aspects.

The ability to perform such verbal tasks is related to familiarity with the job domain which comes with increased experience and also, it is believed, with the development of certain kinds of comprehension skills. These skills are traditionally called for in academic settings where students are required to read or listen to integrated information and then answer non-obvious questions, draw conclusions, or engage in discussion with others. Such comprehension improving activities, which are frequently considered reading comprehension training, might be considered for use in ADEP II as ways to improve practical comprehension and, thus, problem-solving skills.

To some extent, job-related materials should be the materials used for such exercises. Work with these materials would be directed at both increasing domain familiarity and increasing comprehension and problem-solving skills. However, understanding involves not only knowing the elements confined to a limited domain (e.g., a job) but also seeing them in a broader context. In Chapter 3, we discussed how knowledge about the topics in the outer domains (e.g., Academic Support) of the model of Figure 1 may provide a framework for understanding topics in the inner ones, e.g., MOS Performance. In this sense, understanding of one's job and, thus, performance in it might well be enhanced through comprehension development in the outer competence domains. This might be especially true if material or exercises made, or required soldiers to make, explicit connections between outer domains and inner ones, e.g., how the Army's mission affects rules for MOS performance or how a rule of mechanics is reflected in a motor. We have dwelt on this point

because it is a key justification for the belief that general education affects job performance, and, hence, for the proposed combination of job-related basic skills and academic education in ADEP II.

In addition to these higher order verbal skills required by career progression, even in skill level 2, soldiers may more and more be called upon to speak or write more than a word or sentence. Their role as representatives of the Army requires that their mode of expression be correct. For this reason, grammar may be worked on as indirectly related to MOS performance.

Computation requirements vary so much from MOS to MOS that they cannot be discussed generally. However, similar considerations to those relating to grammar might require that all skill level 2 soldiers should perform fundamental arithmetic operations without many obvious errors. Some soldiers in MOSs requiring much math may require extensive math work in ADEP II directly related to job performance.

Soldiers needing assignment to ADEP II primarily because of MOS performance might best be identified through supervisors' recommendations. Since basic skills problems may be less obvious as such during job performance than during training, supervisors may be helped in making such identifications by having access to a list of people with low scores on basic skills components of ASVAB like WK, PC, AR. Additionally, IET and IET ADEP I instructors should have some way of flagging students they have recognized as needing additional skills training to alert those responsible for ADEP II assignment at duty bases.

Off-Duty Functions

At first and subsequent duty bases, soldiers must function not only in their MOS, but off-duty as well. This means they must follow military regulations and procedures, receive services, e.g., medical care, from military

rather than civilian sources, take advantage of recreational and other opportunities offered by the military and civilian communities, obey civilian laws and community customs, maintain standards of health and fitness, relate to others in their new role as soldiers and manage their own finances. For the great majority of newly enlisted soldiers, all the specific military aspects of these performances may be new and, for many, operating as adults away from home for the first time, a number of the other aspects will also be new. Additionally, soldiers may find themselves stationed in a very different community (e.g., Europe) from what they are used to and may know little or nothing about its expectations and resources.

The kinds of demands described in the previous paragraph are assigned to the Domains of Military and General Environmental Support. These are defined in Figure 4. The topic areas are outlined in Chapter 4. Virtually every task which must be performed in regard to these topic areas involves one or another of the basic skills (cf., Chapter 4) usually more than one at a time. Yet, informal experience and results from administration of a competence test developed by the Adult Performance Level Project to 7500 adults show that many adults (particularly those who have dropped out of school before high school completion) are unable to perform such skill applications correctly.

A study asking NCOs to rate performance of first-term soldiers in USAREUR on a set of military and civilian life coping skills identified by experts (see Appendix B) (Dawson, et al., 1981) indicates that many first-term soldiers also perform poorly on some of these tasks.

Arguments can be advanced explaining how failing to meet skills demands in the Environmental Domains can affect MOS performance. For example, a soldier seriously in debt (through poor reading or sales contract, failure to compute interest) may be too distracted to perform well. A soldier who can't

read bus schedules may be late for work. One in non-job related trouble with military authorities may not be promoted. However, it is difficult to make any estimate of the importance of these adverse effects in general. Instead, one might consider the tasks in this domain as clearly being related to a soldier's success in life, which is certainly within the Army's area of concern. In addition, teaching basic skills with regard to these domains provides another context and set of materials which may be more relevant and interesting to the soldier than traditional academic subject matters.

Skills demands in these domains most likely to cause trouble involve the reading of functional documents (likely to contain difficult legal language) the reading and filling in of forms, computations involved in consumer economics, and various kinds of failures of problem solving due to lack of knowledge about an environmental topic area.

It has been demonstrated that basic skills can successfully be taught to adults in the context of these environmental domains. This has been done by the Adult Performance Level Project. An APL high school completion program, which is keyed to identified functional tasks, with student weaknesses determined by performance on a mastery test, is offered. This program which is considerably less time consuming than most traditional ones has been adapted to military use and is being offered at Fort Bliss. A report on this program appears in Appendix A.

The Fort Bliss program is based on the El Paso school district one, with only low level modifications to make it militarily relevant. Because of this, many soldiers may not be taught skill uses as applied to an important specific military situation where they must function. An alternative to this would be to develop a new military curriculum (see Appendix D for example) which would emphasize specifically military skill uses, such as computations with military

time. This curriculum would also treat those general topic areas (such as health, maintenance, describing symptoms to a doctor) which must be mastered in order to perform a specific military subtask (e.g., obtain appointment at dispensary, fill out military medical forms) in a broader context of understanding. In addition, this curriculum should include areas which have few features specific to the military, but which are especially important or difficult aspects of adult functioning. Consumer economics falls in this category and may also be emphasized as the best practical context for assessing and developing a wide range of mathematical skills for soldiers whose MOS requires little math. Emphasis should also be placed on community-specific tasks, where the community or base is located differs from typical soldier civilian experience.

If a fully militarized APL curriculum were developed, it would be usable in states or school districts which accept the APL concept for high school credentialing as a mainly on-duty high school program/MOS performance tasks could then be mastered in the APL division of occupational knowledge. However, this program might not be acceptable in many school districts and may also be less than efficient for GED test preparation.

A curriculum developed for this domain should emphasize actual materials as much as possible, particularly military forms and documents. Although curricula shoud be developed for each identified topic area, an individual soldier would only be required to follow it for those areas where skill use was not adequately demonstrated on a specially developed mastery test. This test then would be used as a diagnostic tool.

Specific identification of soldiers with basic skills problems in these domains may be difficult, since extreme disfunction (e.g., trouble with the law) is likely to be caused by factors other than skills. However, each

soldier in ADEP II for other reasons could be given the mastery/diagnostic test and curricular modules prescribed. In districts where this is possible, this curriculum might be the preferred method of obtaining a high school diploma.

ASVAB Scores

Certain requirements for career progression involve ASVAB scores. For example, a score of 95 or above on three subtests will be required for first re-enlistment as of January 1982 (AR601-280). A GT score of 115 is now required for Officer's Training School. ADEPPT programs are considered appropriate for soldiers wishing to increase their scores to meet this requirement. In addition, since referrals to ADEP II may be based on GT scores, the demands which must be met on the test may be considered part of the target for ADEP II instruction.

What are these demands? Considering just the three GT components on which many requirements are based: The word knowledge (WK) test asks soldiers to choose synonyms for vocabulary words. These words may be expected to be general and predominantly abstract as is frequently the case for vocabulary tests beyond the elementary levels. Improvement of general vocabulary is frequently the target of direct vocabulary teaching and this practice is followed in many BSEP courses. However, it should be noted that a soldier with a vocabulary deficit is more likely to be helped with his immediate problem by training and practice in specific military and MOS terminology than by such general vocabulary programs.

The Paragraphs Comprehension subtest of ASVAB contains the kind of general reading passages, with inferential and direct questions to be answered, found on most reading tests beyond early levels. Thus, it emphasizes

"academic" reading skills. These, as we have argued, are less likely to be demanded by entry level jobs. However, they are likely to be required later on in a career and certainly will be needed in the more selective training schools. Skills program work on improving reading comprehension has been and will be discussed elsewhere in this paper.

The third subtest, Arithmetic Reasoning (AR), requires a soldier to solve mathematical word problems requiring the arithmetic operations. Soldiers with computation problems might well be expected to improve on this test after intensive teaching. However, it should be noted that this test also requires some problem solving and reading for successful performance.

For ADEP II students with skill or educational deficiencies, as opposed to those who wish to upgrade already adequate scores for specific purposes, skills tapped on the ASVAB are probably best addressed in the context of some of the other objectives in ADEP II which have more substantive relationship to the soldier's life and career.

SQT Pass

A significant source of skills demands during a military career is the requirement to pass the SQT test for promotion. This requirement requires covering different materials for each skill level. Investigation has shown that soldiers' failure to pass SQT may be attributed to some or all of the following factors: poor reading comprehension of relevant job material which must be learned, inability to use the complex SQT notice to identify what must be learned, failure to apply effective learning strategies (such as outlining) to material, practical failures such as scheduling sufficient study time, obtaining all necessary material. Note that a soldier may be able to perform his job adequately but have trouble dealing with verbal material describing the tasks he performs.

A program at Fort Dix is specifically targeted at these factors. The program provides on-duty study time and necessary study material for each soldier. Use of the SQT notice is taught in the context of each soldier's materials. Soldiers are given general reading comprehension training and then required to apply it and specific learning strategies, e.g., outlining to their reading material. Test taking skills are covered. Soldiers needing to perform computations are required to demonstrate them.

This program has been very successful and is a demonstration of the utility of targeting skills instruction to specific demands and needs. Similar programs could be developed on other bases. These could be self-contained like the one described for soldiers who had failed previous SQTs and for volunteers. Timing would be critical, since soldiers should have their next SQT notice before participating, but sufficient time left before the next date for studying. Additionally, many features of this program might be adapted for use in ADEP II. In particular, use of the SQT notice should be taught as a functional task and, after learning strategies are introduced, ADEP II students should be required to demonstrate their use with soldier's Manuals as well as more general or academic materials.

High School or GED Requirement

Soldiers wishing to be promoted to skill level 3 must have a high school diploma or general equivalence certificates. Some soldiers, not planning to re-enlist, may wish to attain these credentials for civilian career purposes. These soldiers may enroll on base in a high school completion program which is part of ACES and directed by law to be off-duty when high school requirements do not coincide with improvement of MOS-related skills. The precise requirements a soldier must satisfy to obtain a high school diploma vary from base to

base because they depend on local school districts. Attainment of a GED certificate depends on passing a test containing five subtests, each keyed to an academic skill knowledge area. Although passing scores vary from state-to-state, the test itself is the same for all states and communities.

Before going on to discuss the nature of skill demands made by the high school or GED requirement, we will briefly outline the types of reasons given for requiring this credential from career soldiers.[1] The first two of these are:

(1) This requirement demonstrates the Army's commitment to education and emphasizes the value the Army places on the soldier as a whole person, not just a job performer.

(2) A person, even if originally a dropout, who participates in such a program to completion demonstrates self-discipline and motivation which predict career success.

These two arguments though important are not based directly on skills and knowledge and will not be further considered here.

The next three reasons are more relevant to this report.

(3) High School Diploma or GED demonstrates a soldier has acquired (or had opportunity to acquire) certain skills (reading comprehension, grammar, math, etc.) which are necessary for first-rate performance in all areas.

(4) A High School (or GED) demonstrates a soldier has, with some success, been introduced to various bodies of academic knowledge, e.g., the social sciences, which serve as contexts of frameworks

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[1]For example, in a memorandum dated 9 April 79, signed by LTC Robert Yerts, Deputy Chief of Staff for Personnel of the Department of the Army.

from which to understand or react to events and situations. This knowledge may make people better and more rational problem solvers in practical domains, as well as academic ones.

(5) Skills and knowledges required in academic contexts allow a person to verbally represent and organize his knowledge of practical tasks. This is necessary if he is to teach others.

Whether a person gains a credential through demonstrating a degree of mastery (GED) or participating in school courses (High School Diploma), the skills and knowledge objectives required can, in a general sense, be described similarly. We have attempted to do so in discussing the objectives of the Academic Support domain in Chapter 4. It will be seen that aside from the skills requirements for vocabulary, math, and grammar, the majority of these objectives focus on reading and then reasoning and problem solving with what has been read, integrating new information with what is already known. Instead of being specified as coming from some practical area, passages read are chosen to be representative of three broad academic domains: sciences, social sciences, and humanities. Each of these will require a reader to understand the meaning of different types of words and concepts and perform somewhat different types of problem solving, involving integration of different old knowledge.

None of the skills required by these tasks imply instruction different in kind from the sort of comprehension and problem solving instruction and experience advocated above for other ADEP II components, although the emphasis on purely verbal problem solving (rather than practical) may be greater. Additionally, the demands for abstract vocabulary needed for characterizing these concepts and the relations among them is likely to be greater in the academic domain. These terms can probably best be learned in the context of reading comprehension tasks.

The similarity of the skills demands for academic performances and the comprehension needed for most effective practical job and other problem solving suggests the possibility for integrating ADEP II training with the subject matter aspects of high school completion as well as the skills aspects. Such integration would be facilitated by the development of high school curricula materials which explicitly stated and implicitly suggested how the academic areas discussed might be related to the practical domains of a soldier's life. (See Appendix E for further discussion of military-related basic skills and GED skills).

Performance at Level 3 and Above

An NCO at Level 3 and above faces very different sorts of skills demands for career success than does a soldier at E-1 beginning to learn the basic tasks of his MOS. We emphasized that for a beginning soldier the most important thing needed was the ability to perform certain defined tasks with certain defined materials and the mastery of the basic elements (terms, concepts, etc.) involved in that MOS. An NCO, on the other hand, while he may have to perform some new job tasks and learn some new terms, etc., mainly faces increased demands for independent and responsible problem solving. There will be fewer people more experienced to advise him or her of the correct course of action in a job situation. Because of his or her experience he or she will be entrusted with having to make decisions under more complex and ambiguous circumstances. Complex decisions of this sort may frequently be facilitated by putting the factors and conflicts involved into words. Thus, the NCO's position may be higher than any he or she has previously encountered in practical functioning. This sort of verbalization skill is one frequently emphasized and exercised in academic domains at the high school level and beyond.

However, the typical high school program may not have fostered this ability to a significant extent for the NCO's needs.

Another verbal skill which, while supposedly addressed in academic programs required for E-6 status, may not actually have been developed sufficiently for the functional needs of the NCO, is writing. Not writing, that is simply forming words or identifying grammatical errors, but composing clear, coherent, grammatical reports, evaluations, etc., which attain the writer's purpose. This is a most difficult skill even for college graduates and many writing improvement programs have been designed.

The other potentially new skills emphasis in the NCO's job involves the management of people. Essentially, an NCO is called upon to solve problems based on his understanding of general rules of human behavior and of the specific individuals involved. Although he or she has, to some extent, been doing this throughout his life, the requirements of leadership make this skill into a crucial job demand. Curricula which teach such skills have indeed been developed and are offered, e.,g., to executives, at or beyond the graduate level.

This brief discussion of the increased demands in an NCO's career leads to the suggestion that there is a need for support courses to be offered through ASEP to provide increased skills in verbal communication, spoken and written, and in human behavior and management in general. Just such a recommendation has been made in the ASEP Handbook for ESOs. Detailed listings of potential topics in such courses are given in the appendix to that handbook and will not be repeated here. Population identification is also extensively treated in the ASEP Handbook.

NCOES Course

The support skills programs which might be utilized for NCOES would include those offered for NCO performance, with a curriculum section available for soldiers who wish to improve study skills and learning strategies.

NCOES Courses in ASEP

As a soldier progresses in his career through Level 1 and Level 2, he may take MOS skill upgrading and leadership courses important to obtaining promotions and performing successfully at the next skill level. The MOS-specific tasks for higher skill levels may, for some soldiers, require skills support from ASEP. For all MOS, increased skills demands may come from necessity to read and interpret regulations, policy documents, etc. Particularly demanding may be requirements for soldiers and NCOs to learn to deliver coherent briefings, explanations, etc., and, even more difficult, to write longer pieces such as reports, grammatically and coherently. Leadership requirements may make unprecedented demands on problem solving in regard to people. All these increased requirements, as well as the usual increased demand for learning strategies imposed by training may be supported by ASEP. ASEP support may be particularly important in the case of soldiers taking such courses by extension, since they will not have the instructor to help them in difficulties. Types of training to be used for many of these purposes has already been discussed in regard to career performance. It should be noted here that if the human relations aspects of leadership appear to be causing problems, a successful approach to improvement may involve several students participating in simulated situations. In these simulations, students not only practice communications and human problem solving skills, but through interaction with other participants, exercise such skills.

A P P E N D I X D

Sample Terminal Objectives for the

Army Developmental Education Program

for Performance and Training (ADEPPT)

Sample Terminal Objectives for the ADEPPT

Knowledge/Skill Domains

MOS Career Performance (see also TRADOC job/task analysis)

1. Soldier delivers oral or written report on his own MOS to include its relation to military mission, most frequent tasks performed, length of training, promotion possibilities, etc.
2. Soldier goes through soldiers manual for his MOS distinguishing between tasks he does, and does not perform.
3. Soldier rates tasks in SM he does perform for importance and frequency and those he does not for liklihood of performance in future.
4. Soldier identifies physical requirements for his MOS and reason for them.
5. Soldier identifies, defines and uses in sentence MOS specific terms.
6. Soldier identifies and brings in examples of Army regulations or procedures he must follow in work and explains them to class.
7. Soldier identifies and brings in samples of forms he must fill out in course of job performance, and explains what each entry is and what its function is.
8. Soldier lists to fullest extent possible all mathematical computations, measurements, etc., he performs in course of job and classifies them as to units, operations, complexity, etc.
9. Soldier identifies tasks which give him most problems on job and generates plans for coping with them.

10. Soldier identifies informal procedures for seeking job information through questions, etc., keeps record of who and what he asks for a week, and records success.
11. Soldier lists important information to be found on bulletin board and demonstrates by answering questions he can interpret each document (including duty roster, announcement, off limit areas, and chain of command).
12. Soldier computes time in grade and time in service for self and with simulated data.
13. Soldier demonstrates ability to understand LES statements by answering questions and by catching error.
14. Soldier performs computations from word probvlems involving military time and Julian calendar dates.
15. Soldier lists and brings in all military documents he uses in a week and demonstrates can find specific information in each one.

Direct Career Support

- **Army's Military Mission**

  1. Soldier participates in classroom discussion of Army's military mission and how it affects him.
  2. Soldier demonstrates knowledge of security procedures by describing them and engaging in simulation of procedures to be followed in different circumstances.
  3. Soldier demonstrates orally and through simulation procedures for handling classified materials.

- **Rank and Related Matters**

  1. Soldier engages in discussion of necessity for and role of rank in the military.
  2. Soldier demonstrates understanding of chain of command verbally and through participating in simulated situations.
  3. Soldier demonstrates by role playing proper ways of speaking with superiors.
  4. Soldier describes and demonstrates proper saluting behavior.
  5. Soldier lists guidelines for dealing with members of other military organizations and demonstrates ability to recognize uniforms of services he works with.
  6. Soldier engages in discussion of necessity for and functions of military uniforms, military bearing, etc.
  7. Soldier states in own words regulations pertaining to his own uniform.
  8. Soldier demonstrates ability to read unfamiliar regulation dealing with uniform and way it should be worn by following procedures.

- **Army Contract and Other Documents**

  1. Soldier lists provisions of his contract with the Army, ways he can fail to comply and consequences for him, and what Army has promised him and under what conditions these guarantees are void.
  2. Soldier discusses rights within Army assignment system.
  3. Soldier demonstrates by paraphrasing ability to read travel orders and describes what must be done (e.g., arrange housing, itinerary) when posted to new duty station.
  4. Soldier fills out sample leave request form and discusses consequences of late return to unit.
  5. Soldier demonstrates by answering specific questions ability to interpret duty roster.

- **Promotion Requirements**

  1. Soldier reads promotion regulation and identifies all requirements for promotion.
  2. Soldier decides for hypothetical cases whether a promotion can be expected.
  3. Soldier computes own time in grade and service to next promotion.
  4. Soldier discusses promotion board procedures including sample copy of Board Member Appraisal Work Sheet and engages in simulated appearance before board of comments on other students simulations.
  5. Soldier participates in or comments on simulation of non-promoted soldier being counseled.
  6. Soldier identifies parts of and answers questions about recommended list for promotion.

7. Soldier determines number of points for SQTs, awards, etc., cut off score, gap between what is needed for promotion and what he has and develops plan for getting points.
8. Soldier compiles list of tasks, regulations, procedures, computations, forms, responsibilities, etc., he does not now cope with, which will be part of his job if promoted.
9. Soldier either demonstrates he can deal with job aspects identified in 11 or creates a study/learning plan for coping with them.
10. Soldier discusses concept of secondary MOS and its benefits and possible effects on him.
11. Soldier demonstrates familiarity with basic types of MOS in Army and what their functions and duties are.

- **Military Code of Justice**

1. Soldier engages in discussion of why military needs special laws in addition to civilian laws and of difference between military and civilian justice.
2. Soldier demonstrates understanding of selected sections of UCMJ by paraphrasing them and relating them to own behavior.
3. Given list of violations of UCMJ soldier uses code to determine consequences to violator. Soldier states types of behavior leading to court martial, article 15 or verbal reprimand.
4. Soldier participates in simulation(s) involving co-operating with military police.
5. Soldier identifies orally or in writing military organizations providing legal help and their functions and procedures for utilizing them.

6. Soldier engages in simulation of person requiring legal help from JAG.

- **SQT Performance**

1. Soldier reads regulation about promotion and explicitly identifies and restates relation between SQT and promotion points.
2. Soldier states whether satisfied or dissatisfied with previous SQT performance and relates this to study habits, test taking skills, etc.
3. Soldier identifies and discusses three parts of SQT test, how he believes he will perform on each one and how he might improve this performance.
4. Given real or simulated SQT notice identifies all parts, e.g., time frame and states how his behavior will be affected, e.g., set up study schedule.
5. Soldier lists or collects necessary materials for studying for SQT.
6. Soldier draws up study plan and schedule for next real or hypothetical SQT.
7. Soldier identifies most difficult areas of study for SQT and demonstrates how he has used/is using study and learning skills on those areas.

- **Work Habits and Relationships**

1. Soldier identifies and discusses behaviors which lead to good relationships with superiors.

2. Soldier identifies and discusses behaviors which lead to good work relationships with peers and compares them to ones in No. 1.
3. In two separate weeks soldier keeps diary of sample interactions with peers or superiors and classifies and rates them.
4. Soldier compares results in No. 3 with those of other students.
5. Soldier identifies correct work habit/behavior in series of hypothetical situations.
6. Soldier role plays or discusses others' role playing of situations involving trouble with working relationships.
7. Soldier identifies factors affecting work relationships with his superiors and peers particular to his MOS and discusses them with class
8. Soldier engages in discussion of necessity for sexes treating each other as soldiers on job.
9. Soldier participates in or comments on simulations of sexual harassment situations and discusses appropriate behavior.

- **First Aid and Safety**

1. Soldier demonstrates knowledge of basic principles of first aid by replying to questions.
2. Soldier identifies specifically military aspects of first aid procedures from soldier's manual explains them, and answers questions.
3. Given written first aid procedure soldier demonstrates it with dummy or other soldier in front of class.

4. Given specific simulated emergency situation, soldier role plays phoning medical aid and reporting symptoms.
5. Soldier answers questions about general safety procedures and identifies unsafe elements in pictures of situations.
6. Soldier notes all safety precautions in own environment being taken and those needing to be taken.
7. From experience, reading manual and interviewing members of MOS, soldier prepares short written report on safety measurs in his job and presents it to class.

- **Nutrition, Physical Fitness**

1. Soldier uses various tables to compute proper weight for height, number of calories and other nutrients per day recommended, fitness goals, etc.
2. Soldier designs program of exercise for self and states how much he actually follows.
3. Soldier demonstrates by answering questions that he recognizes as basic food groups and number of servings of each recommended.
4. Soldier keeps record of food intake for week and computes daily calories and other nutrients.
5. Soldier designs balanced diet for self for meal, day, week.
6. Soldier reads ingredients on prepared food labels and discusses nutrients.
7. Soldier describes safe methods of storing different foods.
8. Soldier ranks "snack" food for nutritional value.

Military Environmental Support

- **Rules for Living in Facilities**
  1. Soldier engages in discussion of necessity for rules when people live together in close quarters as in military, and states in general how these rules function.
  2. Soldier paraphrases barracks or family housing rules pertaining to self.
  3. Soldier discusses necessity for keeping living space clean and demonstrates procedures for obeying regulations to do so.
  4. Soldier lists military equipment facilities he uses in one week and paraphrases rules for using them. If paper work is involved, completes necessary forms.
- **Military Shopping**
  1. Soldier lists consumer services and advantages he is entitled to as member of military.
  2. Soldier surveys PX and Commissary and lists items cheaper, the same, and more expensive than in economy stores.
  3. Soldier in Europe demonstrates procedures for using ration cards and purchasing gas coupons.
  4. Soldier in Europe demonstrates he can convert to European money and measurements (for clothing) etc.
- **Army Post Facilities**
  1. Soldier lists facilities on Poat that serve his/her health, religious, financial, legal, educational, and recreational needs.
  2. Soldier states, orally and/or in writing functions of facilities listed above.

- **Educational Opportunities**

  1. Soldier discusses importance of education to him and compares his own educational goals to those of other class members.
  2. Soldier assesses own educational potential and skill strengths and weaknesses.
  3. Soldier compiles list of services offered by Educational Services Office and individual and unit training opportunities and evaluates them in terms of meaning for him.
  4. Soldier observes class being held on base and reports on it to class.
  5. Soldier lists types of non-traditional educational programs potentially available to him and cites advantages and disadvantages as regards his needs and goals.
  6. Soldier cites constraints on his taking advantage of desired educational opportunities while in military.
  7. Soldier cites educational benefits offered by Army and assess them vis a vis own eligibility and educational goals.
  8. Soldier fills out selected admissions applications for educational programs he has stated interest in.
  9. Soldier has real of simulated conference with base Educational Counselor
  10. Soldier sends for high school transcript and identifies on it credits and other requirements needed for diploma.
  11. Soldier distinguishes between GED and high school completion and, if applicable, decides on one most suited for him.
  12. Soldier discusses direct (GED or HS diploma needed for promotion to E-6) and indirect (better able to perform job) role of education in terms of own promotion and advancement.

General Environmental Support

- **Shopping**

1. Soldier discusses orally or in writing kinds of items he buys and what influences his decisions.
2. Soldier lists sensible buying procedures.
3. Soldier lists and discusses sources of consumer information.
4. Soldier does consumer research and reports to class about relative merits of different brands of inexpensive and expensive items (e.g., tuna fish and washing machine).
5. Soldier discusses factors other than value which make person buy more expensive item or at more expensive store (e.g., convenience, prestige).
6. Soldier lists factors affecting stores' prices besides "value" of goods.
7. Soldier solves "unit pricing" problems and selects best buy.
8. Soldier comparison shops for food and other items (including PX, Commissary in comparison) and reports finding to class.
9. Soldier brings in warranty on product he has bought, explains it to class and discusses provisions.
10. Soldier discusses sales, discounts, etc., how they can be used to lower expenses, and where and when they can be expected to occur.
11. Soldier exchanges personal experiences (tips) finding good buys with class members.
12. Soldier lists as many types of stores in community as he can think of, says what they are likely to sell and describes other features (e.g., open all night, discount).

13. Soldier roles plays (or discusses others' role playing) customer seeking information, service at different types of store.
14. Soldier fills out catalogue order forms for products from several catalogues (including necessary computations).
15. Soldier discusses shopping as a problem solving, decision-making, procedure and lists factors involved.
16. Soldier brings in labels and cartons from food and other products and explains implications of what is written on them to class (e.g., ingredients, warnings, etc.).
17. Soldier, in role playing situation, chooses from restaurant menus, orders, checks bill and compute tip, displaying proper social behavior, etc.
18. Soldier participates in survey of restaurant types in community and lists advantages and fetures of each type.
19. Soldier identifies types of items which require care, maintenance and cleaning and how and where to provide it.
20. Soldier reads care instructions on warranty or carton and demonstrates procedures for care.
21. Soldier lists common types of cleaning/care products, what they are used for and how they are used.
22. Soldier lists types of products where "professional" maintenance is recommended.

- **Legal Documents**
  1. Soldier demonstrates ability to read legal documents he might encounter by paraphrasing them and relating them to his own behavior for:

Military contract
Sample credit contract
Article 15
Sample rental contract
Insurance policy
Traffic ticket
Sales agreement

2. Soldier lists situations where he is likely to need legal documents (e.g., getting married, trvelling aborad, etc.).
3. Using real or simulated data soldier fills in application for sample of legal documents, like:

Marriage license
Social security card
Passpart
Driver's license, etc.

- **Taxes**

1. Soldier orally or in writing explains need for taxes and distinguishes between different types and advantages of each.
2. Soldier using real or simulated data fills in income tax forms, including performing computation.
3. Soldier answers questions about what documents should be saved for income tax.
4. Soldier computes tax rates given dfata for different types of taxes.

- **General Community Resources**
  1. Soldier participates in project to collect lists of all the resources available in local and military community and classify them.
  2. Soldier discusses orally or in writing which of identified resources most likely to be used by him.
  3. Soldier discusses how being in military affects resources available to him.
  4. Soldier contacts organization (e.g., chaplain's office) to obtain information about services and programs and reports on information.
  5. Soldier participates in or comments on simulation of parent interviewing day care facilites.
  6. Soldier lists kinds of information available in phone book and from operator, information operator, etc., and demonstrates their use, e.g., finds nearby business, obtains long distance number, finds cheapest way to call etc.
  7. Soldier lists type of postal services available and for set of situations (e.g., valuable package, time not important) chooses most appropriate.
- **Recreation**
  1. Soldier orally or in writing gives reasons for importance of recreation, and advantages of constructive use of leisure over idel use.
  2. Soldier makes classification table listing recreational opportunities available in civilian and military community and their requirements for use, e g., cost, time, special skills.

3. Soldier lists own priorities, constraints for recreations and compares different options to select most suitable.
4. By answering questions, soldier demonstrates reading of recreation schedules and announcements.
5. Soldier demonstrates by listing or simulation, procedures for use of military recreation facilities.
6. Soldier discusses recreational uses of media and contrasts to other uses.
7. Soldier lists all recreations engaged in one week and rates the satisfactoriness of each.
8. Soldier acknowledges use of recreation to meet people and engages or comments on variety of simulations of appropriate behavior for meeting people.
9. Soldier writes essay on good sportsmanship.
10. Soldier solves scheduling problems involving making time for recreation activities in simulated situations of increasing complexity.

- **Informational Resources**
  1. Soldier lists and classifies kind of information available on radio, TV, newspapers, types of magazines and brings in example of each.
  2. Soldier writes essay or engages in discussion of preferred model(s) of getting information.
  3. Soldier lists libraries available to him and services at each.
  4. Soldier finds assigned information at library, through use of card catalogues, reference books, etc.
  5. Soldier asks librarian to help him compile list of information available in library.

6. Soldier lists type of reading matter available (e.g., fiction, non-fiction, short stories) and gives reasons for preference among them for different purposes.
7. Soldier lists other sources of information in community and type of information each has to offer.

- **Transportation**

1. Soldier draws classification table of features and advantages of various models of transportation for local, short and long trip.
2. By solving problems/answering questions, soldier demonstrates ability to use bus, train and plane schedules.
3. Given a series of constraints, soldier simulates or actually engages in phone conversation with airline booking agent.
4. Given appropriate map and itinerary for local, moderate and long distance trips, soldier selects routes.
5. Given local map, public transportation schedule and series of "errands" soldier selects appropriate itinerary, travel modes.
6. Given several trips and modes of travel, soldier does research and computes time and cost.
7. Soldier simulates planning of "ideal" and "practical" vacations"; (itinerary, hotel reservation, etc.) and computes approximate cost.
8. Soldier lists procedures necessary to get local and Army drives license.
9. Soldier obtains appropriate local "rules of road", studies, takes and corrects practice driver's test.

- **Automobile**

  1. Soldier lists factors important to him in buying a car and ranks them in importance.
  2. Soldier brings in ads from newspaper for suitable and unsuitable cars and explains reasoning.
  3. Given various car purchase agreements soldier computes relative interest rate advantages, disadvantages of each.
  4. Given an owners manual and warranty soldier distinguishes between maintenance covered and not covered by warranty.
  5. Soldier describes procedures necessary for keeping car in safe operating condition.
  6. Soldier describes car maintenance he can perform himself.
  7. Soldier compares cost, advantages, etc., of several different car insurance policies he is given to read.
  8. Given a car insurance policy, soldier answers questions about what is/is not covered in different specific situations.
  9. Soldier lists legal procedures which must be followed in buying a car and completes real or simulated paperwork for title transfer, registration, etc.

- **Sales Practices**

  1. Soldier participates in creating list of dishonest sales practices with examples, including deceptive advertising.
  2. Soldier simulates behavior, or discusses simulation, of dealing appropriately with high pressure sales techniques.
  3. Soldier lists recourses open to consumers who have been deceived.

4. Soldier writes letter of complaint about deceptive/dishonest sales practice.
5. Soldier discusses importance of getting sales agreements in writing
6. Soldier, given samples of product warranties and other sales agreements, answers questions indicating understanding of their provisions.
7. Soldier discusses advantages and disadvantages of buying on credit.
8. Given various credit agreements, soldier computes interest rate and total cost of item for each.
9. Soldier discusses different types of credit cards (cards, bank, store, etc.) advantages and disadvantages of each.
10. Soldier fills out several sample applications for credit or credit cards.

- **Illness and Medical Care**

1. Soldier identifies verbally common symptoms (e.g., cough, headache) and what can be done about them.
2. Soldier answers questions demonstrating knowledge of symptoms of serious diseases and those requiring immediate doctor's care.
3. Soldier list medical resources available to him and describes procedures for getting emergency and non-emergency care.
4. Soldier simulates role of patient describing symptoms to medic.
5. Soldier writes down own life medical history and compares it with others in class.

6. Soldier visits medical facilities on base and collects samples of forms to be filled out and fills them out correctly.
7. Soldier describes procedures in routine physical exam and gives reason for each.
8. Soldier writes own immunization records and states why immunizations are necessary.
9. Soldier lists free medical services available in military and computes their costs in civilian section.
10. Given sets of symptoms or situation soldier decides if need no medical care, non-emergency or emergency medical care.

- **Drugs, Alcohol, Smoking**

1. Soldier reads and summarizes article on medical effects of smoking.
2. Soldier engages in or evaluates debate on whether smoking should be illegal in certain public places.
3. Soldier describes legal, medical and personal consequences of drug and alcohol abuse.
4. Soldier takes "test" of whether has symptoms of drug or alcohol abuse.
5. Soldier identifies military and civilian agencies which available for substance abuse and contacts them to find and report on services available
6. Soldier demonstrates by answering questions, symptoms of drug overdoes, and describes or demonstrates first aid procedures.
7. Soldier role plays or discusses role playing of appropriate behavior if soldier suspects buddy of alcohol or drug abuse.

- **Sex and Birth Control**

  1. Soldier describes symptoms of VD and preventive measures to be taken.
  2. Soldier describes appropriate behavior if VD is suspected.
  3. Soldier engages in or evaluates debate about birth control ing primarily a female responsibility.
  4. Soldier makes classification table listing rlevant features, advantages and disadvantages of different methods of birth control.
  5. Soldier collects information about places where birth control information and help available on and off base.
  6. Soldier describes symptoms of early pregnancy and resources and courses available to soldier who suspects she is pregnant.

- **Mental Health**

  1. Soldier reads materials about human needs, values, goals, and feelings, and answers questions about them.
  2. Given hypothetical situations, soldier identifies needs different participants have, their goals and probable feelings, and discusses them with others.
  3. Soldier identifies differences between "normal" feelings: (anger, sadness, anxiety), and symptoms of mental problems.
  4. Given hypothetical situations and symptoms soldier decides and justifies decision if they require psychological treatment.
  5. Soldier identifies mental heatlh facilities available to him on and off base.
  6. Soldier engages in role playing of describing symptoms of mental problem to counselor or discusses others' role playing.

7. Soldier role plays suggesting buddy seek mental counseling.
8. Soldier discusses with classmates techniques for dealing with types of problems not serious enough for counselor.

- **Interpersonal Relations**
  1. Soldier reads material about improving interpersonal relations and answers essay questions about it.
  2. Soldier participates in class compilation of principles for good interpersonal relations, e.g., complimenting people, seeking others' point of view.
  3. Soldier exchanges with classmates techniques for controlling temper.
  4. For a week's period soldier keeps diary of instances where followed and did not follow principles suggested by reading material and class.
  5. Soldier lists procedures to be followed if an interpersonal problem arises on the job, and role plays or watches role playing of sample situations.
  6. Soldier lists procedures to be followed if an interpersonal problem arises on the job, and role plays or watches role playing of sample situations.
  7. Soldier distinguishes between features of interpersonal relations on and off job.
- **Family Relationships**
  1. Soldier reads materials about family relationships and answers essay questions about them.

2. Soldier lists factors which should be considered before people decide to marry.
3. Soldier engages in or evaluates debate about whether marriage obligations, responsibilites, etc., are different for men and women.
4. Soldier constructs two classification tables, one for real and one for ideal division of responsibilities in family.
5. Soldier reacts to simulated marriage problems by suggesting way might be best handled within family.
6. Soldier lists factors likely to put stress on family relations and how being in military is likely to make these better or worse.
7. Soldier describes marriage and family help agencies available on and off base and obtains literature telling of help they offer.
8. Soldier participates in drawing up of guidelines for knowing when family crisis requires professional help.
9. Soldier draws up list of factors to be considered before having a child.
10. Given a child care book, soldier locates answers to various questions about newborn and baby care.
11. Soldier does reserch and estimates monetary cost of having a baby for first year.
12. Soldier participates in class discussion of responsibilities and benefits of being a parent.
13. Soldier reads about principles of good prenatal care and answers questions.

14. Soldier lists programs available on and off base to help prospective parents.
15. Soldier lists safety precautions and mofifications necessary around house for babies and small children.
16. Soldier reads material on child rearing and answers questions.
17. Given hypothetical situations having to do with child rearing, soldier selects course of action and justifies answer in class discussion.
18. Soldier identifies community and military services offering services related to raising of children and the services they offer.
19. Soldier engages in role playing or comments on others' role playing of situations involving parent-teacher conference for various school problems.

- **Banking and Other Services**

1. Soldier lists banks available to him and services offered by each.
2. Soldier fills out applications/paperwork (e.g., withdrawal slip) for using different types of service.
3. Soldier describes services available and what their advantages, disadvantages are.
4. Soldier balances various sample checkbooks, identifies errors, etc.
5. Soldier identifies consequences of writing bad checks.
6. Soldier roles plays applying for credit.
7. Soldier lists resources available to him for emergency financial relief and demonstrates procedures for applying for them.

- **Budget**
  1. Soldier keeps record of expenses for week or month and states if they are higher than desirable.
  2. Soldier draws up budget for self or family and records how he follows it.
  3. Soldier compares budget to that of other soldiers and discusses differences and similarities.
  4. Soldier lists possible means for saving money and their advantages and disadvantages.
  5. Soldier lists consequences of not paying bills.
  6. Given sets of bills brought in by self and class members, soldier identifies selected items on each.
  7. Soldier discusses importance of conserving energy.
  8. Soldier participates in compilation of ways to save energy.
- **Housing**
  1. Soldier lists factors important to him in choosing housing and how they might differ from other people's.
  2. Soldier selects housing ads from paper and states why they are suitable or unsuitable for him.
  3. Soldier discusses advantages and disadvantages of military vs. civilian housing and of types of military housing.
  4. Soldier answers questions about sample housing contracts including comparative cost computation.
  5. Soldier lists points included in typical leases, e.g., damage deposit, length of lease.
  6. Soldier lists informational resources available to him about housing.

6. Soldier lists informational resources available to him about housing.
7. Soldier simulates conversation with prospective landlord or discusses other student's simulation.
8. Soldier writes letter of complaint to landlord.

- **Measurements and Units**

1. Soldier solves word problems involving monetary units, making change, unit costs, etc.
2. Soldier lists and classifies common measurement units used at home and at work, describes what they are used for and gives their metric equivalents.
3. Soldier lists measurement devices and performs measurement with them of home and class room objects, including finding areas, etc.
4. Soldier solves word problems involving mesurement including converting between units.
5. Soldier demonstrates ability to follow a receipe and to double it using measurement units and devices.

Academic Support (See Appendix E for further academic support objectives).

- **Current Events**
  1. Soldier demonstrates orally or in writing that he can derive significance of specimen current events read about in newspaper for self.
- **Voting**
  1. Soldier orally or in writing acknowledges importance of voting by being able to list rights, duties, and obligation of citizen and engaging in discussion of them.
  2. Soldier demonstrates by drawing diagram and classification table knowledge of branches and functions of Federal, State and local government.
  3. For recent election, soldier identifies election issues and argues orally for choice of position.
  4. Soldier lists steps to be followed for voting registration and obtaining absentee ballot.
  5. Soldier marks real or simulated ballot and orally explains what he is doing.
- **Rights of Citizens**
  1. Soldier paraphrases each amendment of Bill of Rights and tells in own words how it affects him.
  2. Soldier lists resources available to him of rights violated.
  3. Soldier lists rights of people accused of crimes and engages in simulation of such a situation.

- **Laws**

  1. Soldier explains in own words why laws are necessary and should be obeyed.
  2. Soldier lists areas (e.g., changing marital status, driving, etc.) where laws exist and explains why they are necessary in these areas.
  3. Soldier outlines content of laws most affecting his own life.
  4. Soldier identifies situations where he would require legal help and how he would seek it.

- **Study Habits and Learning Strategies**

  1. Soldier assesses deficiencies in own past study habits and states how they could be improved.
  2. Soldier reads material on study, test-tasking and learning strategies and discusses one he things would be of most use to him.
  3. Soldier selects high school completion or GED subject, compiles material for study, and practices applying good strategies for studying, learning and test preparation, keeping a study log and diary and recording before and after scores on GED practice test.

A P P E N D I X E

ADEPPT Terminal Objectives and the

Test of General Educational Development (GED)

(Reference Chapter 3, page 36)

(and Appendix C, page C-20)

Appendix E

The ADEPPT program is to replace not only BSEP II, but the High School Equivalency program as well. In order to insure that the eventual program would meet the requirement for on-duty presentation, i.e., military relevance, the content areas for the terminal objectives were determined primarily with regard to the identified military life coping skills (Appendix D). In developing these objectives, it was appropriate to ask how well the mastery of them would simultaneously satisfy high school diploma requirements or prepare students to pass the GED exam. Since local high school requirements vary and since the GED test was based on the consideration of the actual learning outcomes associated with a high school diploma the skills and knowledges tested by the GED were used as a standard against which to compare the adequacy of the ADEPPT objectives for high school credentialling.

Content and task requirements of the current GED battery are described in Figure E-1. In terms of the content knowledges addressed by the ADEPPT objectives, it appears that there would be considerable overlap between ADEPPT Government and GED political science material, ADEPPT consumer/financial and the GED economics test, and some overlap between ADEPPT health and GED behavioral science and biology. In addition, the study and learning skills section of ADEPPT career support requires the student to select a GED subject area and apply study and learning skills to it. Insofar, as this is done the ADEPPT curriculum covers this additional GED topic.

Although writing skills are not covered as such in the ADEPPT terminal objectives, written exercises potentially make up a large proportion

of the ways the student demonstrates that he or she has mastered a topic. If these written exercises are expected not only to contain appropriate content, but to be logically organized and technically correct as well, writing skills could be included in the ADEPPT curriculum. Whether grammer, punctuation etc., is taught as an independent topic, in remedial loops or solely in the contexts of the student's writing is a matter for future decision.

The ADEPPT objectives include mathematical computations wherever they are relevant to the topic area. The Career Support objectives require the soldier to demonstrate performance of all the tasks in his MOS which involve mathematics. Charts, graphs, maps, etc., which are covered in the GED mathematics and social studies tests, are also included in ADEPPT. While it would not be surprising if certain GED mathematical topics were not directly covered by the ADEPPT curriculum, it could be expected that the majority of them would be included, if not as part of terminal behavior, as part of a prerequisite competency, for such a behavior.

Perhaps the most important way that mastery of an ADEPPT curriculum would prepare a soldier to cope successfully with a test such as the GED lies in ADEPPT'S emphasis on using information one has read (or otherwise acquired) to answer questions, integrate knowledge, form opinions, draw conclusions, understand and use concepts, etc. A careful reading of the GED test descriptions indicates that such skills are heavily emphasized not only in the Reading Skills test, but throughout. It is this emphasis on such information using skills which should make an ADEPPT program valuable not only for achieving the precise terminal objectives identified, but for all information using activities including the passing of high school courses and tests.

Figure E 1

DESCRIPTION OF TESTS IN THE CURRENT GED BATTERY

TEST 1: WRITING SKILLS (80 items, 60 minute time limit)
The questions on the Writing Skills Test are intended to measure a candidate's ability to use Standard English clearly and effectively. The test questions are drawn from five general categories: Spelling, Punctuation and Capitalization, Usage, Sentence Correction, and Logic and Organization. Each is described below. The distribution of emphasis is Spelling, Punctuation, Capitalization (25%), Usage (30%), Sentence Correction (30%) and Logic and Organization (15%).

SPELLING: Questions present groups of four words - one of which may be misspelled. To minimize the reading required in this section, the words appear in list form rather than in context. The candidate is asked to determine which word, if any, is misspelled. If none of the words are misspelled, the student should select answer choice 5 -- No error.

CAPITALIZATION AND PUNCTUATION: This section consists of single sentences, each of which presents four possible errors in capitalization or punctuation. The candidate is asked to determine which one, if any, of the underlined uses is incorrect. If all four uses are acceptable, the answer is No error -- option 5.

USAGE: This section consists of single sentences, each with four underlined portions. The candidate is to determine which one, if any, of the underlined portions presents incorrect usage. If there is no error, the candidate should mark option 5. Errors generally reflect accepted rules for correct usage.

SENTENCE CORRECTION: This section consists of single sentences. A portion of each sentence is rewritten four times. Although the points of usage tested here are generally the same as those in the section above, this format enables candidates to make decisions about effective expression as well as acceptable usage.

LOGIC AND ORGANIZATION: This section consists of a set of questions based on a written passage containing a variety of errors. The candidate reads the passage and then answers several questions concerning ways to improve its style or organization. This format requires candidates to deal with some of the more complex skills used in effective writing.

TEST 2: SOCIAL STUDIES (60 items, 90 minute time limits)
The Social Studies Test includes questions on history, economics, geography, political science, and behavioral science. However, no single form of the test includes all the elements of any of these subjects. The questions on the tests are selected from the broad group of topics listed under each major subject area below.

U.S. HISTORY: (25%) The Colonial period, expansion, the Civil War and Reconstruction, the growth of industry, reform, the United States as a world power, and modern problems*.

ECONOMICS: (20%) Production, consumer affairs, financial institutions, the role of government, labor, the world economy, and contemporary problems.

GEOGRAPHY: (15%) Maps and globes, climate, natural resources major culture regions, and population distribution.

POLITICAL SCIENCE: (20%) Political systems, the executive legislative, and judicial branches of government, state and local government, social problems.

BEHAVIORAL SCIENCE: (20%) Psychological, Sociological, and anthropological views of human beings as individuals, in groups, and within their cultures; human behavior, heredity and environment, and race and prejudice.

The questions in the Social Studies tests vary in level of difficulty, the particular thinking required (knowledge, comprehension, or the application of information may be tested), and the type of stimulus material used (for example, graphs, tables, narration, or pictures). Some questions stand alone while others are part of a set based on common stimulus material. The latter type comprise about two-thirds of the questions in the tests.

Questions that can be answered only by recall of facts or events have been avoided. Within the field of labor economics, for example, candidates are not asked to identify individuals such as John L. Lewis or know that the initials CIO mean - even though both are important pieces of information. Rather, the questions assume the kind of knowledge that might be expected of individuals

who have achieved at least a minimal level of literacy in the social sciences, even if they have not taken formal courses. It is expected, for example, that candidates would understand that the United States has experienced certain distinct economic periods and that United States citizens have certain specific rights. Questions on such topics are frequently developed to allow candidates to choose the best answer through reasoning from an understanding of certain fundamental concepts.

*Candidates who take the GED tests in Canada after September, 1979 will be asked questions concerning Canadian social studies topics. In Canadian batteries, the weights for Economics and Geography are reversed from those above.

TEST 3: SCIENCE (60 items, 90 minute time limit)
The Science Test covers various subjects in the biological and physical sciences. No single examination attempts to cover all the topics in each major category. Questions for the examination are selected from the following areas:

BIOLOGY: (50%) Genetics; evolution; cells and their structure; human anatomy and physiology; ecology and ecosystems; biological roots of behavior; structural and functional relationships in plants and animals, including reproduction and photosynthesis.

EARTH SCIENCE: (20%) Structural geology including landforms, earthquakes, volcanoes, continental drift, rock formation, minerals sedimentation, ice age, fossils, and earth history; composition and structure of the atmosphere, including temperature, wind, and precipitation; oceanography and water resources, pollution, and tidal waves; the solar system and effects of the magnetic field.

CHEMISTRY: (15%) Atomic theory and structure, molecular bonding and geometry of molecules and their effect on chemical behavior; the nature of chemical reactions and accompanying energy changes; applications of the principle of conservation of matter; types of solutions.

PHYSICS: (15%) mechanics and measurement (laws of motion, forces, and inertia), Kinetic and potential energy, heat transfer, gas laws and kinetic theory, changes of state, optics and waves, and electricity and magnetism.

The Science test contains two types of questions. One, comprising about one-third of the test questions, includes single multiple-choice questions based solely on material presented in the question itself. These items require an understanding of fundamental concepts in the various science topics covered by the test. The bases for these questions rest on the understanding and application of broad scientific principles.

The second type of question, comprising approximately two-thirds of the test, consists of written passages or other stimuli accompanied by multiple-choice questions related to the content of the stimuli. These questions are designed to measure reading comprehension in the sciences and also to show how well the candidate can understand, analyze, and use the information presented in the passage. It is recommended that a candidate read an entire passage through at least once before trying to answer any questions. Then, he or she may refer to the passage as needed in order to answer each question. Sometimes the answer to a question is not stated directly in the passage, so some background in the natural sciences must be called upon if the candidate is to apply the ideas and information given in the reading material.

TEST 4: READING SKILLS (40 items, 60 minute time limit)
Each question in the Reading Skills Test is based on a written passage. One or more questions follow each passage; however, the answer to each question in the set can be determined without answering the other questions correctly.

The passages are drawn from a wide range of reading materials that have been classified into five areas:

PRACTICAL READING: (15%) Utilitarian materials encountered by adults in daily living. The materials include instructions, handbooks, recipes, contracts, indexes and library references, catalog entries, outlines, nonpolitical cartoons, pictorial announcements, advertisements, newspapers, propaganda and forms.

GENERAL READING: (30%) General reading material similar to that which adults encounter in their daily lives, including editorials and social, scientific, and popular articles commonly found in newspapers and magazines.

PROSE LITERATURE: (30%) Expository and creative prose that generally appeals to twentieth century adults of both sexes and of various ethnic and racial backgrounds including contemporary English language writing (American, Canadian, and British) of acknowledged literary quality as well as an occasional piece from the eighteenth or nineteenth century.

POETRY; (12%) Light and serious verse that could be accurately interpreted on a first or second reading by most high school seniors without benefit of class discussion.

DRAMA (12%) Contemporary passages from comedy, tragedy, or social drama that are likely to appeal to adults of both sexes and various ethnic and racial backgrounds.

The difficulty of the passages and the amount of reading required varies from the level used in the popular press to an upper limit appropriate for high school graduates. Attempts were made to use selections with broad appeal and without stereotyping and to avoid a disproportionate representation of any one subgroup of the population.

The Reading Skills tests focus on the skills generally associated with reading comprehension. These skills include: identifying main ideas and major concepts; identifying details; recognizing relationships, such as cause and effect; recognizing emotional reactions of the characters in a passage; interpreting descriptive and figurative language; and identifying and arriving at conclusions and generalizations. Understanding what is read is emphasized more than determining implied meaning-that is, there are many more questions (approximately two-thirds of the questions in each test) that require the ability to identify main ideas, major concepts, and details than there are questions that require other reading comprehensive skills. Furthermore, the test questions do not focus on historical or biographical details about the author, nor do the best answers depend on previous knowledge about the author or work from which the passage was selected.

TEST 5: MATHEMATICS (50 items, 60 minute time limit)
The following is a list of the mathematics topics in the GED Mathematics Tests:

ARITHMETIC: (55%) Practical applications involving addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals; properties of numbers; measurement of length, area, volume, money, time, mass/weight, and liquid/capacity; averages; interpretation of tables, graphs, and charts.

GEOMETRY: (20%) Measurement of angles, line segments, area, and perimeter; direct and indirect measurement; similarity of geometric shapes (applications with diagrams or maps for visual support); scale reading and interpretation; application of the pythagorean relationships.

ALGEBRA: (25%) Coordinate geometry (number line, rectangular coordinates, and distance between two points); slope; ratio and proportion; use of algebraic formulas (excluding exponents, radicals and roots); linear equations and simple linear inequalities; simple quadratic equations; exponents; point of intersection of two lines.

The Mathematics Test places emphasis on the ability to solve real-life problems; it does not test the recognition of specialized mathematics vocabulary or symbolism. The reading is simplified as much as possible.


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